



# California Regional Water Quality Control Board

## Central Coast Region



Linda S. Adams  
Secretary for  
Environmental Protection

Internet Address: <http://www.swrcb.ca.gov/rwqcb3>  
895 Aerovista Place, Suite 101, San Luis Obispo, California 93401  
Phone (805) 549-3147 • FAX (805) 543-0397

Arnold Schwarzenegger  
Governor

May 21, 2008

Glenda Andino  
2780 Miranda Ave.  
Alamo, CA 94507

Sterling Trust Company Trustees  
1020 Dolorita Ave.  
Glendale, CA 91208

Greg Carrasco  
16 Toyon Court  
Sausalito, CA 94965

Big Creek Lumber Company  
c/o Matt Dias, Registered Professional  
Forester  
3564 Highway 1  
Davenport, CA 95017

Dear Ms. Andino et. al:

### **ENROLLMENT OF TIMBER HARVEST PLAN (THP) NO. 1-07-143 SCR WHITEHOUSE THP UNDER ORDER NO. R3-2005-0066, GENERAL CONDITIONAL WAIVER OF WASTE DISCHARGE REQUIREMENTS – TIMBER HARVEST ACTIVITIES IN THE CENTRAL COAST REGION**

The purpose of this letter is to notify you<sup>1</sup> that I have enrolled THP No. 1-07-143 SCR Whitehouse THP under Order No. R3-2005-0066, General Conditional Waiver of Waste Discharge Requirements – Timber Harvest Activities in the Central Coast Region (General Waiver) (Attachment 1).

Please review the attached General Waiver requirements, as you are responsible for complying with all of the prescribed conditions.

### **MONITORING**

California Water Code Section 13269(a)(2) requires monitoring to verify the adequacy and effectiveness of the General Waiver's conditions. Water quality monitoring is required as part of your enrollment under the General Waiver.

The General Waiver requirements include three different monitoring tiers (I, II, and III) based on the proposed timber harvest activities and site conditions. I may modify the monitoring requirements for an individual plan.

<sup>1</sup> Throughout this document "you", "your", or "the Discharger" refers to the landowner and anyone working on behalf the landowner to conduct timber harvest activities including implementation of water quality monitoring requirements.

**California Environmental Protection Agency**

## Overview of Monitoring Tier requirements:

- Tier I:** CDF Forest Practice Rules compliance monitoring.  
Road Inventory Program.  
Forensic monitoring as necessary.
- Tier II:** CDF Forest Practice Rules compliance monitoring.  
Road Inventory Program.  
Forensic monitoring as necessary.  
Visual and photo monitoring of harvest infrastructure.
- Tier III:** CDF Forest Practice Rules compliance monitoring.  
Road Inventory Program.  
Forensic monitoring as necessary.  
Visual and photo monitoring of harvest infrastructure.  
Water Column monitoring.

Based on eligibility criteria, your plan has a low cumulative effects ratio of 3 percent, a low drainage density index of 89, and a medium soil disturbance factor of 2116. Based on the information contained in your timber harvest plan information sheet, you are eligible for enrollment under Tier I. According to section g of your timber harvest plan information sheet, you indicated that the Whitehouse THP has an established winter operations plan. At their July 5, 2005 meeting, the Central Coast Water Board required all Timber Harvest Plans and Nonindustrial Timber Management Plans that operate during the winter period to conduct monitoring consistent with Tier III. Therefore, your plan is enrolled under Tier III.

Your Tier III Monitoring and Reporting Program (MRP) is attached (Attachment 2). Please review it carefully. Monitoring must begin at the onset of timber operations. Please inform Water Board staff if you suspect any of the monitoring points might be too difficult to access in inclement weather. You are required to implement the MRP, Road Management Program, Standard Operating Procedure 5.2.3 Photo Documentation Procedure, Standard Operating Procedures for Continuous Temperature Monitoring, and Standard Operating Procedures for Instream Turbidity Monitoring until I revise or rescind it.

**ADDITIONAL REQUIREMENTS**

Included in the California Department of Forestry and Fire Protection (CDF) approved Whitehouse THP is road watercourse crossing M6. Crossing M6 is a culvert crossing of a Class III watercourse. The existing crossing forces the watercourse to deviate from its natural flow line, as indicated by the acute angle of approach of the watercourse at the inlet of the culvert. The watercourse falls greater than five and a half feet from the inlet to the outlet of the culvert. The culvert is undersized and rests on top of a Humboldt Crossing. The Humboldt Crossing is not clearly characterized in the THP. Additionally, a vehicle is incorporated into and protruding out of the fill surrounding the culvert. Finally,

the right bank, downstream of the culvert outlet, exhibits active erosion. This downstream erosion is most likely a direct result of the hydromodification at crossing M6. Finally, as stated in the THP:

"Existing large woody material currently present below the [Corrugated Metal Pipe] shall remain in place to perform as a grade control and prevent and minimize head-cutting upstream of the crossing. The retention of the large woody material shall perform as a metering device for stored sediment upstream of the crossing and to allow for the contiguous input of large woody debris into the stream system over time. The lack of this sediment metering would result in sizeable flushes of sediment input into the existing stream system during heavy ephemeral flows as evidenced by the rust lines visible within the existing culvert. Based upon characteristics of the class III watercourse (Channel width, channel gradient upslope of crossing, and grade changes below crossing) the [Registered Professional Forester] estimates that there is approximately 100 – 150 cubic yards [seven to ten dump truck loads] of stored sediment upslope of [crossing] M6 that shall be metered out over time via the maintenance of the grade control structure."

Replacement of crossing M6, as described in the THP, could pose significant adverse impacts to water quality and its beneficial uses.

Therefore, pursuant to California Water Code §13383, the Discharger must prepare and submit a monitoring report for crossing M6. The purpose of the monitoring report is to allow Water Board staff to assess the channel grade control structure and erosion control measures and ensure they are adequate to prevent channel erosion and sedimentation. The Discharger is required to:

1. Retain the services of a licensed Civil Engineer or licensed Engineering Geologist (licensed engineer) with a minimum of five years of applicable experience. Upon excavation of the corrugated metal pipe, vehicle, and associated fill at crossing M6, and prior to any additional work at the crossing M6, the licensed engineer must inspect the Humboldt Crossing proposed to remain in place. If the engineer determines the existing Humboldt Crossing is sufficient to control headcutting and prevent sediment release, the engineer must approve (via stamp and signature) the design. If field modifications are necessary, the engineer must approve the modifications. The monitoring report shall include a description and photographs of the engineer's approved design.
2. Include a long-term monitoring and maintenance plan to detect and prevent failure at crossing M6.
3. Submit the monitoring report to Water Board within 21 days of completion of construction at crossing M6.

**REPORTING**

Your reporting requirements are contained in the MRP and its exhibits. Please review the reporting requirements in your MRP carefully and include all information requested in your reports. Requirements for reporting include annual reporting as well as events that may be affecting water quality throughout the year. Specific requirements include:

- Providing an annual report by November 15 of each year;
- Status of active timber harvest operations;
- Forest Practice Rules violation reporting;
- Sediment release reporting.

Please provide monitoring reports to us in a timely manner. Failure to provide reports may subject you to civil liability per California Water Code Section 13268 (or 13350) as stated in the MRP (Attachment 2).

In addition to your reporting requirements, you must maintain a logbook with all monitoring and water quality analysis data; road inventory program reports; and findings from visual monitoring. You must keep logbooks up to date and available for review upon request by Water Board staff.

The goal of the Regional Water Quality Control Board is protection of water quality and its beneficial uses. If you conduct the THP without enrollment under the General Waiver, you may be subject to enforcement action. Please work proactively with us when dealing with water quality issues. We encourage you to seek our input and assistance when performing road repairs, crossing modifications, and other mitigation work (unstable slopes, etc.) You must, as outlined in the attached monitoring and reporting program, report water quality problems you notice during inspections and maintenance (timber or non-timber related). We may be able to assist the work you do with funding from grants and other programs. Our job is to help you manage your land in a way that minimizes the risk to water quality. Please do not hesitate to contact us if you have any questions or concerns.

If you have any questions, please contact **Julia Dyer** at [jdyer@waterboards.ca.gov](mailto:jdyer@waterboards.ca.gov) or **805-594-6144**.

Sincerely,

  
Roger W. Briggs  
Executive Officer

Attachments:

1. General Conditional Waiver of Waste Discharge Requirements – Timber Harvest Activities in the Central Coast Region
2. Monitoring and Reporting Program for THP No. 1-07-143 SCR Whitehouse THP with Exhibits 1 - 3.

E-mail: Matt Dias, Registered Professional Forester  
[mattd@big-creek.com](mailto:mattd@big-creek.com)

Donna Bradford, County of Santa Cruz  
[donna.bradford@co.santa-cruz.ca.us](mailto:donna.bradford@co.santa-cruz.ca.us)

S:\NPS\Timber Harvest\\_Case Files by Site\1-07-143 SCR Whitehouse THP\EuGW1-07-143SCRWhitehouseTHP5\_21\_08.doc

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL COAST REGION**

**ORDER NO. R3-2005-0066**

**GENERAL CONDITIONAL WAIVER OF WASTE DISCHARGE  
REQUIREMENTS – TIMBER HARVEST ACTIVITIES  
IN THE CENTRAL COAST REGION**

(Revised on July 8, 2005)

WHEREAS, the California Regional Water Quality Control Board, Central Coast Region (hereinafter Regional Board or Central Coast Water Board), finds that:

1. California Water Code (CWC) Section 13260(a) requires that any person discharging waste or proposing to discharge waste within any region that could affect the quality of the waters of the State, other than into a community sewer system, shall file with the appropriate Regional Board a report of waste discharge (ROWD) containing such information and data as may be required by the Regional Board.
2. The Central Coast Water Board prescribes waste discharge requirements except where the Central Coast Water Board finds that a waiver of waste discharge requirements for a specific type of discharge is in the public interest pursuant to CWC (Sections 13267 and 13269).
3. CWC Section 13267 states:

(a) A regional board, in establishing or reviewing any water quality control plan or waste discharge requirements, or in connection with any action relating to any plan or requirement authorized by this division, may investigate the quality of any waters of the state within its region.

(b)(1) In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

4. CWC Section 13269(a) states:

(1) On and after January 1, 2000, the provisions of subdivisions (a) and (c) of Section 13260, subdivision (a) of Section 13263, or subdivision (a) of Section 13264 may be waived by the state board or a regional board as to a specific discharge or type of discharge if the state board or a regional board determines, after any necessary state board or regional board meeting, that the waiver is consistent with any applicable state or regional water quality control plan and is in the public interest. The state board or a regional board shall give notice of any necessary meeting by publication pursuant to Section 11125 of the Government Code.

(2) A waiver may not exceed five years in duration, but may be renewed by the state board or a regional board. The waiver shall be conditional and may be terminated at any time by the state board or a regional board. The conditions of the waiver shall include, but need not be limited to, the performance of individual, group, or watershed-based, monitoring, except as provided in paragraph (3) below. Monitoring requirements shall be designed to support the development and implementation of the waiver program, including, but not limited to, verifying the adequacy and effectiveness of the waiver's conditions. In

establishing monitoring requirements, the regional board may consider the volume, duration, frequency, and constituents of the discharge; the extent and type of existing monitoring activities, including, but not limited to, existing watershed-based, compliance, and effectiveness monitoring efforts; the size of the project area; and other relevant factors. Monitoring results shall be made available to the public.

(3) The state board or a regional board may waive the monitoring requirements described in this subdivision for discharges that it determines do not pose a significant threat to water quality.

5. The Central Coast Water Board, in compliance with CWC Section 13269, reviewed the previously issued categorical waiver for timber harvest activities (Central Coast Water Board Resolution No. 89-04, Water Quality Control Plan (Basin Plan) Appendix A-23) and determined that it should not be renewed.
6. In accordance with CWC Section 13269, the Central Coast Water Board shall regulate discharge of waste associated with timber harvest activities through the requirements of this general conditional waiver, or, for timber operations that are not eligible for this waiver, through individual waste discharge requirements or individual conditional waivers.
7. The Central Coast Water Board has adopted the Basin Plan for the Central Coast Region, that establishes beneficial uses, water quality objectives, waste discharge prohibitions, and implementation policies that apply to waters of the State and discharges to waters of the State within the Central Coast Region.
8. Pursuant to the Basin Plan and State Board Plans and Policies, including State Water Board Resolution No. 88-63, the existing and potential beneficial uses of waters potentially affected by the proposed activity include:
  - a. Agricultural Supply (AGR)
  - b. Aquaculture (AQUA)
  - c. Preservation of Biological Habitats of Special Significance (BIOL)
  - d. Cold Freshwater Habitat (COLD)
  - e. Commercial and Sportfishing (COMM)
  - f. Estuarine Habitat (EST)
  - g. Freshwater Replenishment (FRSH)
  - h. Ground Water Recharge (GWR)
  - i. Industrial Service Supply (IND)
  - j. Migration of Aquatic Organisms (MIGR)
  - k. Municipal and Domestic Supply (MUN)
  - l. Navigation (NAV)
  - m. Hydropower Generation (POW)
  - n. Industrial Process Supply (PRO)
  - o. Rare, Threatened, or Endangered Species (RARE)
  - p. Water Contact Recreation (REC-1)
  - q. Non-contact Water Recreation (REC-2)
  - r. Shellfish Harvesting (SHELL)
  - s. Spawning, Reproduction, and Development (SPWN)
  - t. Warm Freshwater Habitat (WARM)
  - u. Wildlife Habitat (WILD)
  - v. Inland Saline Water Habitat (SAL)
9. The Basin Plan contains water quality objectives developed to protect the above-listed beneficial uses of water. The factors in CWC Section 13241, including economic considerations, were considered as required by law during the development of these objectives. Prohibitions, provisions, and specifications contained in this Order implement these previously developed water quality objectives. Compliance with water quality objectives will protect the beneficial uses listed in the above paragraph.

10. The California Department of Forestry and Fire Protection (CDF) and the California Board of Forestry (BOF) regulate timber harvest activities on nonfederal lands in accordance with the Z'berg-Nejedly Forest Practice Act (Public Resources Code, Section 4511 et seq.) and the California Forest Practice Rules (Title 14, California Code of Regulations, Section 895 et seq.). CDF is the state agency with primary jurisdiction over timber activities. The Central Coast Water Board cannot issue permits to allow timber harvesting, but only regulates water quality impacts of harvesting operations that have received a permit from CDF. CDF issues such permits by approving timber harvest plans or non-industrial timber management plans. The Central Coast Water Board does not have legal authority to require an alternative project.
11. In 1988, the State Water Board:
  - (a) Conditionally certified the "Water Quality Management Plan for Timber Operations on Nonfederal Lands" which included those California Forest Practice Rules selected as best management practices and the process by which those rules are administered
  - (b) Designated CDF and the BOF as joint Water Quality Management Agencies (WQMA)
  - (c) Executed a Management Agency Agreement with CDF and BOF for the purpose of implementing the certified plan and WQMA designations
12. The Management Agency Agreement between the State Water Board and CDF/BOF required a formal review of the California Forest Practice Rules and administering processes no later than six years from the date of certification. To date, the State Water Board and CDF/BOF have not completed that review.
13. The USEPA has not approved the State Water Board's certification of the California Forest Practice Rules and administering processes for regulation of timber harvest activities on nonfederal lands in California.
14. The Central Coast Water Board, in accordance with the California Environmental Quality Act (Public Resources Code, Section 21000 et seq.) (CEQA), has conducted an Initial Study in accordance with Title 14, California Code of Regulations, Section 15063.
15. The Secretary of the Resources Agency has certified that the CDF's timber harvest plan regulatory program can function as a substitute for an Environmental Impact Report or a negative declaration (CEQA Guidelines § 15251.) Registered Professional Foresters submit either a timber harvest plan (THP) or Non-Industrial Timber Management Plan (NTMP) and only CDF has the authority to grant discretionary approval for projects. CDF considers all the significant environmental effects of the project and makes a finding under CEQA Guidelines section 15091 for each significant effect. If CDF finds that the timber operations will not have a significant effect on the environment, a THP or NTMP serves as a substitute negative declaration. If CDF finds that the timber operations may have a significant effect on the environment, the THP or NTMP serves as a substitute environmental impact report, and includes mitigation of potential impacts. CDF consults with the Central Coast Water Board when a THP or NTMP is developed. This waiver requires each enrolled Discharger to comply with all requirements of the respective THP or NTMP.
16. Relevant factors in determining whether a project covered by a general conditional waiver is in the public interest include the following:
  - Whether the discharge is already regulated by another governmental entity;
  - Whether the discharger will observe reasonable practices to minimize the deleterious effects of the discharge;
  - Whether a feasible treatment method exists to control the pollutants in the discharge;
  - Whether a resource agency (California Department of Fish and Game, County of San Mateo, Santa Cruz, Santa Clara, Monterey, San Benito, San Luis Obispo, Santa Barbara, or Ventura) has filed a water quality related non-concurrence with CDF regarding the proposed harvest and that non-



- concurrency has not been resolved; and
  - Whether conditionally waiving ROWDs and/or waste discharge requirements will adequately protect beneficial uses while allowing the Central Coast Water Board to utilize more of its scarce resources to conduct field oversight, public outreach and, where necessary, enforcement.
17. The timber harvest plan regulatory program is regulated by the California Department of Forestry, and requires the Discharger to implement practices to control water quality impacts, including erosion and sedimentation. Local ordinances also require various controls. The conditions of this Order protect beneficial uses by:
- (i) Prohibiting pollution, contamination or nuisance;
  - (ii) Requiring monitoring and compliance with applicable water quality control plans;
  - (iii) Requiring the Discharger to grant access to Central Coast Water Board staff to perform inspections; and
  - (iv) Requiring approval of the THP or NTMP by the California Department of Forestry and Fire Protection.
18. The Central Coast Water Board finds that the adoption of the "General Conditional Waiver of Waste Discharge Requirements - Timber Harvest Activities" will not have a significant impact on the environment and will be in the public interest provided that dischargers:
- (a) Comply with the conditions of this Order; and
  - (b) File with the Central Coast Water Board the applicable eligibility documents as described herein, to demonstrate that compliance with the waiver conditions will be achieved; and
  - (c) Comply with applicable State Water Board and Central Coast Water Board plans and policies and as those plans and policies may be amended from time to time through the amendment process;
19. Pursuant to CWC Section 13269, this action waiving the issuance of waste discharge requirements for certain specific types of discharges: (a) is conditional, (b) may be terminated at any time, (c) does not permit an illegal activity, (d) does not preclude the need for permits which may be required by other local or governmental agencies, and (e) does not preclude the Central Coast Water Board from administering enforcement remedies (including civil liability) pursuant to the CWC.
20. A waiver of waste discharge requirements for a type of discharge may be superseded by the adoption by the State Water Board or Central Coast Water Board of specific waste discharge requirements or general waste discharge requirements for that type of discharge.
21. Management practices are the most feasible treatment method to control the discharges. If a proposed timber harvest is conducted in the manner prescribed in the THP or NTMP and the conditions of this Order, a waiver of waste discharge requirements is in the public interest and is consistent with applicable water quality control plans, including the Water Quality Control Plan, Central Coast Region.
22. The winter period for the Central Coast Region shall be October 15 through April 15.
23. The rain year for the Central Coast Region shall be July 1 through June 30.
24. The results from the Eligibility Criteria for a specific THP or NTMP will function as a minimum level for establishing monitoring requirements for that THP or NTMP.

25. Tier III monitoring is required if ground based equipment is used off of an all weather road during the period October 15 to May 1. Tier III monitoring is required for the next 24 months (until July 31, 2007) for all THPs or NTMPs that fall into Tier II or III.
26. The Central Coast Water Board has adopted a Negative Declaration in accordance with CEQA and the CEQA Guidelines (Title 14, California Code of Regulations, Section 15000 et seq.). The Negative Declaration concludes that the waiver of waste discharge requirements for specific types of timber harvest operations pursuant to this Order will not have a significant impact on the environment.
27. Copies of the proposed Order and monitoring and reporting plan were transmitted to all agencies and persons known to be interested in this matter according to the applicable provisions of CEQA.
28. The Central Coast Water Board conducted a public hearing on July 8, 2005 in San Luis Obispo, California, and considered all testimony and evidence concerning this matter;

**THEREFORE IT IS HEREBY ORDERED:**

1. In accordance with CWC Section 13269, the waste discharges related to timber harvest activities in the Central Coast Region, that are not subject to individual conditional waivers or waste discharge requirements, shall be regulated by general conditional timber harvest waiver requirements, and waste discharge requirements and the requirement to submit a report of waste discharge are hereby waived subject to the following conditions:
  - a. "Discharger" means the landowner and anyone working on behalf of the landowner in the conduct of timber harvest activities.
  - b. The Discharger shall submit a Notice of Intent (NOI) on the attached form (Attachment A) or on such other form that the Executive Officer requires. This waiver shall not take effect as to a particular timber operation until the Executive Officer approves the NOI in writing.
  - c. The Discharger shall comply with all requirements of applicable water quality control plans (examples shown in Attachment B) as these may be modified from time to time pursuant to amendments to water quality control plans adopted by the Central Coast Water Board and approved by the State Water Resources Control Board (State Water Board) and water quality control plans and policies adopted by the State Water Board.
  - d. The Discharger shall obtain CDF approval of a THP and/or NTMP for the timber harvest activities before enrollment in this waiver takes effect. The Discharger shall conduct timber harvest activities in accordance with the approved THP or NTMP and with all applicable sections for the Forest Practice Rules.
  - e. Discharger shall notify the Central Coast Water Board concurrently when submitting a request to CDF for a minor or major amendment.
  - f. The Discharger shall obtain and comply with all local, state and federal permits required by law. The Discharger shall comply with all applicable county ordinances related to timber operations, including zoning ordinances.
  - g. The Discharger shall not create a condition of pollution, contamination, or nuisance, as defined by CWC Section 13050.
  - h. The Discharger shall not discharge any waste not specifically regulated by this Order, except in compliance with CWC Section 13264. Waste specifically regulated by this Order includes: earthen

materials including soil, silt, sand, clay, rock; organic materials such as slash, sawdust, or bark. Examples of waste not specifically regulated by this Order include petroleum products, hazardous materials, or human wastes.

- i. The Discharger shall not cause alteration in stream temperature that exceeds Basin Plan requirements.
  - j. The Discharger shall allow Central Coast Water Board staff reasonable access, in accordance with Public Resources Code section 4604(b) and California Water Code section 13267, onto the affected property for the purpose of performing inspections to determine compliance with the conditional waiver requirements.
  - k. Pursuant to California Water Code Section 13267, the discharger shall comply with Monitoring and Reporting Program No. R3-2005-0066. The Central Coast Water Board needs this information to verify that a general conditional waiver of waste discharge requirements is the appropriate regulatory tool for Timber Harvest activities in San Mateo, Santa Cruz, Santa Clara, Monterey, San Benito, San Luis Obispo, Santa Barbara, and Ventura counties. Evidence that supports the need for this information was presented at the July 8, 2005 meeting of the Central Coast Water Board, the staff report for Item 26 at that meeting, and Monitoring and Reporting Plan No. R3-2005-0066.
  - l. This Order does not regulate point-source discharges that require an NPDES permit under the Clean Water Act, including but not limited to silvicultural point-source discharges as defined in 40 CFR Chapter 1 Part 122.27.
  - m. The Discharger shall take immediate action to repair failed crossings, culverts, roads and other sources of sediment.
  - n. All erosion and sediment control devices, management measures and mitigations prescribed in a THP or NTMP shall be maintained in good working order for the term of the general waiver requirements.
  - o. The Discharger shall comply with all requirements of the Executive Officer pursuant to MRP R3-2005-0066.
2. The Central Coast Water Board, based on the above-noted facts and findings, determines that it is not necessary at this time to adopt individual or general waste discharge requirements for waste discharges related to timber harvest activities that meet the conditions specified in this waiver and which are conducted in accordance with the requirements specified in this waiver.
  3. This Waiver shall not create a vested right and all such discharges shall be considered a privilege, as provided for in CWC Section 13263.
  4. The Executive Officer shall not approve the NOI or shall terminate the applicability of a waiver to specific timber harvest activities (as applicable) if the Executive Officer makes any of the following determinations:
    - a. The timber harvest activity is not in compliance with any applicable condition of this waiver.
    - b. The timber harvest activity has varied in whole or in any part from the approved THP or NTMP, unless these changes result in better protection of water quality.
    - c. The timber harvest activity is likely to adversely affect the quality or beneficial uses of waters of the State. In making this determination, the Executive Officer shall consider, at a minimum, the THP or NTMP, information from the pre-harvest inspection or other site inspections, the Notice of Intent, the Eligibility Criteria (Exhibit 1 to MRP R3-2005-0066), and all available monitoring reports.

July 8, 2005

5. Upon receipt of notice of termination of applicability of the waiver, the discharger shall immediately cease all timber harvest activities that may result in discharges to waters of the State, other than activities necessary to control erosion. Upon notice of termination, the discharger must file a report of waste discharge and applicable filing fee. Timber harvest activities that may result in discharges that could affect the quality of waters of the State may commence only upon enrollment by the Executive Officer under general waste discharge requirements, the adoption by the Central Coast Water Board of an individual waiver of waste discharge requirements or individual waste discharge requirements, or in accordance with CWC Section 13264(a).
6. This general conditional waiver shall become effective on July 8, 2005, and shall expire on July 8, 2010, unless terminated or renewed by the Central Coast Water Board. The Central Coast Water Board may terminate this waiver at any time, either as to a particular timber harvest or in its entirety.
7. As provided by CWC Section 13350(a), any person who, in violation of any waiver condition, discharges waste, or causes or permits waste to be deposited where it is discharged, into the waters of the state, is subject to administrative or civil liability for the violation.
8. Any person affected by this action of the Central Coast Water Board may petition the State Water Board to review the action in accordance with section 13320 of the California Water Code and Title 23, California Code of Regulations, Section 2050. The petition must be received by the State Water Board within 30 days of the date of this Order. Copies of the law and regulations applicable to filing petitions will be provided upon request.

I, Roger W. Briggs, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of a Order adopted by the California Regional Water Quality Control Board, Central Coast Region, on July 8, 2005.

  
Roger W. Briggs, Executive Officer

7-29-05  
Date

**MONITORING AND REPORTING PROGRAM  
ORDER NO. R3-2005-0066**

**FOR THE GENERAL CONDITIONAL WAIVER OF  
WASTE DISCHARGE REQUIREMENTS – TIMBER HARVEST ACTIVITIES IN  
THE CENTRAL COAST REGION  
TIER III MONITORING FOR 1-07-143 SCR WHITEHOUSE THP**

**May 21, 2008**

Your<sup>1</sup> plan is enrolled in Tier III monitoring. THPs that are categorized by the eligibility criteria as Tiers II or III cannot be downgraded to a lower category based on other criteria. The Water Board's Executive Officer may not change the monitoring requirements so they are less stringent than the requirements in the designated tier from the eligibility criteria.

Based on the eligibility criteria your plan is eligible for enrollment under Tier I. At their July 5, 2005 Board Meeting the Board established that all Timber Harvest Plans and Nonindustrial Timber Management Plans that operate during the winter period must conduct monitoring consistent with Tier III.

At their September 2006 Board Meeting, the Water Board Members decided that you may revert to your original monitoring tier ranking, Tier I, when and if all the following conditions are met:

1. All harvest operations are complete.
2. At no time during the period October 15 to May 1 were ground based equipment used off of an all weather road.
3. The discharger submits a request in writing verifying that conditions 1 and 2 are met and requests to revert to the original tier level. \*
4. The request is submitted on or before November 15<sup>2</sup>.

This Monitoring and Reporting Program Order No. R3-2005-0066 (MRP) is issued pursuant to Water Code sections 13267 and 13269. Failure to comply with this MRP may subject you to monetary civil liability in accordance with Water Code section 13268 and 13350. Monitoring shall begin at the onset of timber harvest operations and must comply with this MRP and any subsequent revisions. Monitoring shall continue until this MRP is rescinded.

---

<sup>1</sup> "Discharger", "you", or "your" means the landowner and anyone working on behalf of the landowner in the conduct of timber harvest activities.

<sup>2</sup> The discharger must conduct Tier III monitoring at the onset of timber harvest activities and continue Tier III monitoring until they receive a letter signed by the Executive Officer approving the request to revert to a lower monitoring tier. Dischargers may not switch back and forth between tiers over different monitoring seasons.

**Monitoring and Reporting Program Timber Harvest Activities  
Order NO. R3-2005-0066**

The Water Board's Executive Officer determines which monitoring tier applies to a THP after considering the THP, information from the pre-harvest inspection or other site inspections, the Timber Harvest Information Form and Fact Sheet, and the Eligibility Criteria (attached in Exhibit 1).

**SITE SPECIFIC MONITORING LOCATIONS FOR TIER III MONITORING**

This MRP takes into account specific site conditions and mitigations to establish monitoring locations (see attached map, Exhibit 2 Monitoring Locations) that will provide functional monitoring information. The Discharger is required to perform monitoring at these locations as described below in Section I – Implementation and Effectiveness Monitoring and Monitoring Frequency; Section II – Data Logging and Reporting; and Section III – Standard Provisions.

**VISUAL MONITORING POINTS:** The Discharger is required to conduct visual monitoring at the points listed below.

Visual monitoring points shall include the full length of roads, watercourse crossings, landings, skid trails, water diversions, watercourse confluences, known landslides, and all mitigation sites in the Timber Harvest Plan (THP) area (as documented the CDF approved THP).

**PHOTO-MONITORING POINTS:** The Discharger is required to monitor Photo-monitoring points listed below (guidelines in Exhibit 3). Photo-monitoring points:

**P1: Mitigation Point 3 (M3)** a temporary skid trail crossing of Class I Whitehouse Creek located in the southeast of the Whitehouse THP property. The discharger must conduct photo-monitoring at this crossing before, during, and after construction.

**P2: Mitigation Point 6 (M6)** an existing forty-eight (48) inch corrugated metal pipe crossing of Class III watercourse located in the southeast of the Whitehouse THP property. The discharger must conduct photo-monitoring at this crossing before, during, and after construction. (Note: regardless of monitoring tier level, the discharger must monitor photo-monitoring point P2.)

**WATER COLUMN MONITORING POINTS:** The Discharger is required to measure in-stream temperature and turbidity conditions at the following water column monitoring points:

**Monitoring and Reporting Program Timber Harvest Activities  
Order NO. R3-2005-0066**

**Turbidity monitoring locations above and below:**

**P1: Mitigation Point 3 (M3) a temporary skid trail crossing of Class I Whitehouse Creek located in the southeast of the Whitehouse THP property.**

**P2: Mitigation Point 6 (M6) an existing forty-eight (48) inch corrugated metal pipe crossing of Class III watercourse located in the southeast of the Whitehouse THP property.**

**Temperature monitoring locations:**

**P1 (Upstream monitoring location): Above M3 a temporary skid trail crossing of Class I Whitehouse Creek located in the southeast of the Whitehouse THP property.**

**P3 (Downstream monitoring location): One hundred and fifty (150) feet downstream of M3 a temporary skid trail crossing of Class I Whitehouse Creek located in the southeast of the Whitehouse THP property.**

**CDF FOREST PRACTICE RULES COMPLIANCE MONITORING:** The Discharger is responsible for and is required to ensure timber harvest activities are conducted in accordance with the approved THP and with all applicable sections of the Forest Practice Rules. This includes allowing site access for compliance inspections by California Department for Forestry and Fire Protection and Central Coast Regional Water Quality Control Board pursuant to 40 CFR Article 8, Section 4604.

**ROAD INVENTORY PROGRAM:** The Discharger is required to develop and implement a Roads Management Program (example attached in Exhibit 2, Big Creek Road Inventory Program) within the THP area. The road management program must be approved by the Water Board's Executive Officer prior to implementation.

**FORENSIC MONITORING:** The Discharger is required to conduct forensic monitoring as described in Section I below.

**Monitoring and Reporting Program Timber Harvest Activities  
Order NO. R3-2005-0066**

**SECTION I – IMPLEMENTATION AND EFFECTIVENESS  
MONITORING AND MONITORING FREQUENCY**

\*

**VISUAL MONITORING**

**VISUAL MONITORING POINTS:** Visual monitoring points must include the full length of roads, watercourse crossings, landings, skid trails, water diversions, watercourse confluences, known landslides, and all mitigation sites (as documented in the CDF approved THP) in the plan area. Visual monitoring points must be at locations within the timber harvest plan area where timber harvest activities have the greatest risk of potential discharge (sites may be established by the Water Board's Executive Officer during or after the pre-harvest inspection).

**VISUAL MONITORING FREQUENCY:** The Discharger is required to monitor all visual monitoring points established by the Water Board's Executive Officer during or after the pre-harvest inspection for existing or potential sources of erosion. The Discharger is required to perform visual monitoring within 12 to 24 hours of storm events of two inches of rain or greater within a 24-hour period.

**"Year One"** – You are required to monitor a minimum of three times over each 12 months during **"Year One"** monitoring. **"Year One"** monitoring begins with the onset of timber harvest operations. **"Year One"** monitoring then continues during the entire length of time active timber harvest operations occur plus one year past the end of active timber harvest operations.

**Monitoring Event One:**

The Discharger is required to perform the first monitoring event within 12 to 24 hours of the first storm event that yields two inches of rain or greater within a 24-hour period.

**Monitoring Events Two and Three:**

The Discharger is required to perform the next two monitoring events within 12 to 24 hours of the next two storm events (one monitoring event each storm) that yield two inches of rain or greater within a 24-hour period and soil saturation after the start of the winter period on October 15.

**Years Two through Five** – In years two through five, following completion of timber harvest operations and a determination by the Water Board's Executive Officer that implemented management practices are functioning to protect water



**Monitoring and Reporting Program Timber Harvest Activities  
Order NO. R3-2005-0066**

quality and beneficial uses (as documented by information contained in the annual report and post-harvest inspection conducted by Water Board staff), visual monitoring shall be implemented according to the Road Management Program developed by the Discharger and approved by the Water Board's Executive Officer (example attached in Exhibit 3, Big Creek Road Inventory Program).

It is your responsibility to schedule a post-harvest inspection with Water Board staff. You may call to schedule an inspection no sooner than 10 months after the timber harvest plan is complete.

Important Note: You may not begin Year Two monitoring until you are directed to do so in writing by the Water Board's Executive Officer.

If implemented management practices are not adequately protecting water quality and beneficial uses, as determined by the Water Board's Executive Officer, the Discharger is required to repeat "Year One" monitoring. In addition to supplementary monitoring, the Water Board's Executive Officer will determine additional management measure implementation required.

**Summary of Visual Monitoring Frequency:**

**"Year One":** minimum of three events  
**Years Two through Five:** consistent with the Road Management Program developed by the Discharger and approved by the Water Board's Executive Officer.

**PHOTO-MONITORING**

**PHOTO-MONITORING POINTS:** Photo-monitoring points shall be at locations within the timber harvest plan area where timber harvest activities have the greatest risk of potential discharge (sites may be established by the Water Board's Executive Officer during or after the pre-harvest inspection). Photo-monitoring points must include **sites** up and down stream of each newly constructed or reconstructed Class I and Class II watercourse crossings and landings within a Class I or II Watercourse or Lake Protection Zone (WLPZ). Monitoring photos need to be of sufficient quality to record the effectiveness of the implemented management practice.

**Monitoring and Reporting Program Timber Harvest Activities  
Order NO. R3-2005-0066**

The Discharger must:

- i. Utilize the attached document titled "Standard Operation Procedure 5.2.3 - Photo Documentation Procedure" (including any subsequent revisions to SOP 5.2.3) as the protocol for all photo-monitoring (attached in Exhibit 3).
- ii. Utilize flagging, rebar, or another method of establishing the photo-monitoring point site locations.
- iii. Utilize all photo-monitoring point locations until this Monitoring and Reporting Program is revised or rescinded.

**PHOTO-MONITORING FREQUENCY:** The Discharger is required to monitor all photo-monitoring points established by the Water Board's Executive Officer during or after the pre-harvest inspection.

**"Year One"** - You are required to photo-monitor according to the following four conditions during "Year One" monitoring.

- Prior to the onset of timber harvest operations as baseline monitoring. (One Photo Set)
- Following the first significant storm event (First Storm) (One Photo Set).
- Following completion of timber harvest activities (One Photo Set).
- Following a significant storm event during the month of April (April Storm) (One Photo Set). A significant storm event means any storm with two inches of rain or greater within a 24-hour period and soil saturation (i.e., soil saturation typically occurs after a minimum of four inches of precipitation after the start of the winter period on October 15).

Additionally, the Discharger shall photograph new or reconstructed Class I and Class II water crossings:

- Before construction begins, after construction is completed, and after the crossing structure is removed (if crossing is temporary).

The Discharger is required to conduct photo-monitoring within seven days of all of the following:

1. The first storm.
2. Completion of timber harvest activities.

**Monitoring and Reporting Program Timber Harvest Activities  
Order NO. R3-2005-0066**

3. April storm events. If no significant storm event occurs in the month of April, the Discharger must complete photo-monitoring by April 30 of the same year.

**Years Two and Five** - In years two and five, following completion of timber harvest operations and a determination by the Water Board's Executive Officer that implemented management practices are functioning to protect water quality and beneficial uses (as documented by information contained in the annual report and a post-harvest inspection conducted by Water Board staff), the Discharger must conduct the April storm photo-monitoring.

It is your responsibility to schedule a post-harvest inspection with Water Board staff. You may call to schedule an inspection no sooner than 10 months after the timber harvest plan is complete.

Important Note: The Discharger may not begin Year Two monitoring until directed to do so in writing by the Water Board's Executive Officer.

If implemented management practices are not adequately protecting water quality and beneficial uses, as determined by the Water Board's Executive Officer, the Discharger must repeat "Year One" monitoring. In addition to supplementary monitoring, the Water Board's Executive Officer will determine additional management measure implementation required.

**Summary of Photo-monitoring Frequency:**

"Year One": 2 photo sets (minimum)  
Year Two: 1 photo set  
Year Five: 1 photo set

**TEMPERATURE MONITORING**

**TEMPERATURE MONITORING POINTS:** The Discharger is required to monitor temperature continuously as prescribed in the document Central Coast Regional Water Quality Control Board, Timber Harvest Program, Standard Operating Procedures for Continuous Temperature Monitoring (April 2006) (attached in Exhibit 3) during the months of May 1 through October 15. Monitoring sites will be established by the Water Board's Executive Officer during or after the pre-harvest inspection. Continuous water temperature monitoring is required.

If no Class I watercourse exists on the parcel where timber harvest activities occur, and there is water in the Class II during the months of May 1 through

**Monitoring and Reporting Program Timber Harvest Activities  
Order NO. R3-2005-0066**

October 15, the Discharger is required to conduct temperature monitoring in the Class II watercourse.

**TEMPERATURE MONITORING FREQUENCY:** The Discharger is required to monitor all temperature monitoring points.

**"Year One"** - The Discharger is required to program data loggers to record point measurements every hour during the months of May 1 through October 15 at all established temperature monitoring points.

**Years Two and Five** - In years two and five, following completion of timber harvest operations and a determination by the Water Board's Executive Officer (as documented by information contained in the annual report and a post-harvest inspection conducted by Water Board staff) that implemented management practices are functioning to protect water quality and beneficial uses, the Discharger is required to program data loggers to record point measurements every hour during the months of May 1 through October 15 at all established temperature monitoring points.

It is your responsibility to schedule a post-harvest inspection with Water Board staff. You may call to schedule an inspection no sooner than 10 months after the timber harvest plan is complete.

Important Note: The Discharger may not begin Year Two monitoring until directed to do so in writing by the Water Board's Executive Officer.

If implemented management practices are not adequately protecting water quality and beneficial uses, as determined by the Water Board's Executive Officer, the Discharger shall **repeat "Year One" monitoring**. In addition to supplementary monitoring, the Water Board's Executive Officer will specify any additional required management measures.

**Summary of Temperature Data Sets:**

<b>Year One:</b>	1 data set
<b>Year Two:</b>	1 data set
<b>Year Five:</b>	1 data set

**TURBIDITY MONITORING**

**TURBIDITY MONITORING POINTS:** The Discharger is required to monitor turbidity as prescribed for storm event-based turbidity monitoring and forensic

**Monitoring and Reporting Program Timber Harvest Activities**  
**Order NO. R3-2005-0066**

monitoring consistent with the requirements in the document Central Coast Regional Water Quality Control Board, Timber Harvest Program, Standard Operating Procedures for Instream Turbidity Monitoring (October 2006) (attached in Exhibit 3). The Discharger is required to monitor all newly constructed or reconstructed Class I and II crossings within the timber harvest plan area in place after October 15 for turbidity (a hand held turbidimeter is acceptable for this purpose). The Discharger is required to measure turbidity approximately 25 feet upstream and downstream of all newly constructed or reconstructed Class I and II road crossings or combination of sites if there is close site proximity (sites may be established by the Water Board's Executive Officer during or after the pre-harvest inspection). The Water Board's Executive Officer may require turbidity monitoring if no newly constructed or reconstructed crossings exist within a proposed timber harvest plan and the plan has activity within a Class I or II WLPZ.

**TURBIDITY MONITORING FREQUENCY:** The Discharger is required to monitor turbidity within 12 hours of a storm event which yields two inches or more of rain within a 24-hour period. If a qualifying storm terminates or two inches is reached between the hours of 3:00 pm (1500 hour) and 9:00 pm (2100 hour) you are required to conduct turbidity monitoring within 18 hours.

**Year One** You are required to monitor a minimum of three times over each 12 months during Year One monitoring.

Monitoring Event One:

The Discharger is required to perform the first monitoring event within 12 hours of the first storm event that yields two inches of rain or greater within a 24 hour period.

Monitoring Events Two and Three:

The Discharger is required to perform the next two monitoring events within 12 hours of the next two storm events (one monitoring event each storm) that include two inches of rain or greater within a 24 hour period and soil saturation after the start of the winter period on October 15.

**Years Two through Five** - In years two through five, following completion of timber harvest operations and a determination by the Water Board's Executive Officer (as documented by information contained in the annual report and a post-harvest inspection conducted by Water Board staff) that implemented management practices are functioning to protect water quality and beneficial

**Monitoring and Reporting Program Timber Harvest Activities  
Order NO. R3-2005-0066**

uses, the Discharger is required to conduct turbidity monitoring based on need as determined by forensic monitoring.

It is the Discharger's responsibility to schedule a post-harvest inspection with Water Board staff. You may call to schedule an inspection no sooner than 10 months after the timber harvest plan is complete.

Important Note: The Discharger may not begin Year Two monitoring until directed to in writing by the Water Board's Executive Officer.

If implemented management practices are not adequately protecting water quality and beneficial uses, as determined by the Water Board's Executive Officer, the Discharger will be required to **repeat "Year One" monitoring**. In addition to supplementary monitoring, the Water Board's Executive Officer will specify additional required management measures.

**Summary of Turbidity Data Sets:**

**Year One:** 1 data set (minimum of three events)  
**Years Two through Five:** as needed based on forensic monitoring.

**FORENSIC MONITORING**

1. If at any time during implementation or effectiveness monitoring, the Discharger observes failed management measures and/or source of discharge, the Discharger is required to conduct forensic monitoring to identify the source. Management measure failure is defined as: 1) whenever an implemented management measure creates a condition of pollution, contamination, or condition of nuisance, as defined by CALIFORNIA WATER CODE (CWC) Section 13050, or 2) when lack of implementation of a necessary management measure creates a condition of pollution, contamination, or condition of nuisance, as defined by CWC Section 13050.
2. If management measures fail (this includes failure to implement appropriate management measures as determined by CDF and documented by CDF as a violation of the Forest Practice Rules) the Discharger is required to photo<sup>3</sup> document them and is required to implement management practices immediately to prevent discharge and impacts to water quality.

---

<sup>3</sup> Monitoring photos need to be of sufficient quality to record the effectiveness of the implemented management practice.

**Monitoring and Reporting Program Timber Harvest Activities  
Order NO. R3-2005-0066**

3. If timber activities cause a discharge (sediment, soil, other organic material, etc.) into waters of the State, the Discharger is required to measure in-stream turbidity (using grab samples) at the point of discharge into waters of the state. If there is a discharge into a Class III watercourse and water is no longer flowing, the Discharger is required to measure in-stream turbidity in the closest Class I or Class II watercourse downstream of the discharge.
4. If at any time during implementation or effectiveness monitoring, the Discharger observes a discharge (sediment, soil, other organic material, herbicides, pesticides, fluids from timber equipment (oil, hydraulic fluid, etc), etc.), the Discharger is required to notify the Water Board within 24 hours.
5. The Discharger is required to submit to the Water Board a written report, including photo documentation, water quality data, and the management measures or corrective actions and a description of their effectiveness within 10 working days. Upon review of the report, the Water Board's Executive Officer will determine completeness of the report and the need for additional actions necessary for the protection of water quality and beneficial uses.

**FORENSIC MONITORING AREAS OF CONCERN:** The following areas must be addressed during forensic monitoring if water diversion, feral pig activity, or trespass activity are causing or threatening to cause impacts to water quality.

**Water Diversion:** The Discharger is required to monitor the water diversion point(s) for total daily water usage when water is being diverted. The Discharger is required to monitor the creek to ensure no more than 10% of the creek flow is diverted.

**Feral Pig Activity:** During any inspection, the Discharger is required to document all evidence of feral pig activity near watercourses that may be contributing discharges to waters of the state. The Discharger must address the feral pig activity according to forensic monitoring requirements described in 1 – 5 above.

**Trespass Activity:** During any inspection, the Discharger is required to document all evidence of trespass activity near watercourses that may be contributing discharges to waters of the state. The Discharger must address the trespass activity according to forensic monitoring requirements described in 1 – 5 above.

**Monitoring and Reporting Program Timber Harvest Activities**  
**Order NO. R3-2005-0066**

**FORENSIC MONITORING FREQUENCY:** The frequency of Forensic Monitoring is coincident with implementation and effectiveness monitoring, or at any time a failed management measure and/or discharge is reported or observed.



**Monitoring and Reporting Program Timber Harvest Activities  
Order NO. R3-2005-0066**

**SECTION II - DATA LOGGING AND REPORTING**

**LOGBOOKS:** The Discharger is required to maintain logbooks for recording all visual and water analysis data. Logbooks are required to include documentation of maintenance and repair of management practices. These logbooks must be available for inspection to the Water Board staff.

**HEALTH AND SAFETY:** The Discharger is responsible for ensuring that all monitoring is done in a safe manner. If any monitoring point is too dangerous to sample, then the Discharger is required to report this circumstance to the Water Board within 48 hours.

**ROAD MANAGEMENT PROGRAM:** The Discharger is required to develop and implement a Roads Management Program (example attached in Exhibit 3, Big Creek Road Inventory Program) within the THP area. Prior to implementation, the road management program must be approved by the Water Board's Executive Officer. After each storm event that triggers an inspection, the Discharger is required to perform a field inspection and prepare a field form as described in the protocol for the road management program. The Discharger is required to enter the data into a logbook (same as described in item a. above) and database or spreadsheet which tracks observations, work completed, and dates of last review. If the need for repair is immediate, the Discharger is required to promptly develop an appropriate treatment so that the Discharger can complete corrective action as soon as practical.

**SEDIMENT RELEASE REPORTING:** The Discharger is required to report to the Water Board within 48 hours whenever at least one cubic yard of soil is released to a waterway due to anthropogenic causes or at least five cubic yards of soil is released to a waterway due to natural causes, or when turbidity is noticeably greater downstream compared to upstream (of a crossing or the Plan area). The Discharger is required to submit a written report to the Water Board within 10 days of detection. The Discharger is required to investigate source areas of sediment. If sources are found, the Discharger will locate and document the source and size of the release. If sources related to timber harvest activities are found, the Discharger is required to immediately correct the source if possible, or schedule corrective action at an appropriate time given the site conditions.

**VIOLATION REPORTING:** The Discharger is required to report any violation of the Forest Practice Rules, to the Water Board within 48 hours. The Discharger is required to provide the report in writing to the Water Board within 10 working days of the violation. The written report must include photo documentation and water quality data (if discharge enters waters of the state) before and after

**Monitoring and Reporting Program Timber Harvest Activities  
Order NO. R3-2005-0066**

remedial action. Upon review of the report, the Water Board's Executive Officer will determine completeness of the report and the need for additional actions necessary for the protection of water quality and beneficial uses. The Discharger is required to complete any additional monitoring the Water Board's Executive Officer determines is necessary.

**ANNUAL REPORTING:** By November 15 of each year, the Discharger is required to submit an Annual Report to the Water Board using the template that can be downloaded from:

<http://www.waterboards.ca.gov/centralcoast/Facilities/TimberHarvest/index.htm>

Under "Monitoring and Reporting" click on "Annual Report Template." In addition to the reporting requirements already set forth in the MRP, the annual report must include each of the following<sup>4</sup>:

**General**

- ❖ The name and address of the person submitting the report, as well as the day, month, and year in which the report is being submitted, at the top of the first page.
- ❖ The subject line of the annual report must state the THP number, three-letter county code, plan name as it appears in the approved THP, NTO number, and specific units within the THP that have been enrolled under the General Waiver.
- ❖ Time period during which the data was collected.
- ❖ List Tier level and summarize the monitoring requirements.
- ❖ A status of active timber harvest operations including:
  - Day, month, and year the harvest opened and closed for the season.
  - Previous year activities (types of activities, locations, percent harvested, area of harvest, and extent of overall plan completion)
  - Planned activities including estimated month and year harvests activities must resume.
  - Estimated month and year harvesting will be completed.
  - Wet weather problems observed.
  - Any other critical information.
- ❖ A summary of all violations. If there were no violations, please state it as such.

---

<sup>4</sup> Portions of these requirements and sections of the template may not apply to your specific MRP (e.g. If your MRP does not require temperature monitoring, the temperature monitoring requirements should be ignored).

**Monitoring and Reporting Program Timber Harvest Activities  
Order NO. R3-2005-0066**

- ❖ Detailed documentation of rainfall measurement procedures and locations or a reference to the page number in the THP where this is described. Describe the type of rain gauge(s) used. If applicable include the link to the Web site where data for the rain gauge may be viewed.
- ❖ With the first annual report, a copy of the road management program.
  - A summary of the road management program<sup>5</sup> and actions implemented for the protection of water quality and beneficial uses.
- ❖ Recommendations for improving the monitoring and reporting program.

**Water Quality Monitoring (if required)**

- ❖ A summary of the water quality monitoring performed during the previous year. Any monitoring described in the summary must also include an electronic submittal of the data.
- ❖ A detailed map with the following specifications:
  - In color (if possible).
  - Title stating: "Water Quality Monitoring Locations for THP No. XXXX"
  - All monitoring locations and routes clearly marked with unique site identification tags.
  - A Key or Legend identifying all monitoring locations and routes.
  - North Arrow.
  - Scale

**Visual Monitoring**

- ❖ *A summary of all visual monitoring activities performed during the previous year.*
  - Summary must include dates and times visual monitoring occurred and any corrective actions taken during inspections.
  - Attach inspection forms or copies of logbook pages detailing inspections.

**Photo-monitoring (if required)**

- ❖ Submittal of all data and photos in electronic format.

---

<sup>5</sup> Big Creek's Road Inventory Program may be used as a model.

**Monitoring and Reporting Program Timber Harvest Activities**  
**Order NO. R3-2005-0066**

**Turbidity Monitoring (if required)**

- ❖ All data submitted in an electronic format compatible with Microsoft Excel.
- ❖ Make and model of turbidimeter being used.
  - Copy of the manufacture's protocol / recommendation for proper use of the turbidimeter.
- ❖ A summary of all turbidity monitoring activities performed during the previous year.
- ❖ Completed Field Data Sheet with data from all monitoring events. (if more than four events, there is no need to complete top section on additional pages)

**Continuous Temperature Monitoring (if required)**

- ❖ All data submitted in an electronic format compatible with Microsoft Excel.
- ❖ Make and model of the data loggers being used at each monitoring location.
  - Copy of the manufacture's protocol / recommendation for proper use of the loggers.
- ❖ Calibration check form for each data logger.
- ❖ Description of any modifications or adjustments made based on the calibration checks and field observations.

Monitoring and Reporting Program Timber Harvest Activities  
Order NO. R3-2005-0066

**SECTION III - STANDARD PROVISIONS**

1. The Water Board shall be allowed:
  - a. Entry upon premises where timber harvest activities occur;
  - b. Access to copy any records that must be kept under the conditions of these requirements;
  - c. To inspect any timber harvest activity, equipment (including monitoring and control equipment), practices, or operations regulated or required under these requirements; and,
  - d. To photograph, sample, and monitor for the purpose of showing timber harvest requirements compliance.
2. The Discharger is required to maintain records of all monitoring information and results. Records must be maintained for a minimum of three years after the MRP is rescinded. This period may be extended during the course of any unresolved litigation or when requested by the Water Board.
3. Any person signing a report makes the following certification whether written or implied:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

The Water Board's Executive Officer may modify or rescind this Monitoring and Reporting Program at any time, or may modify or rescind the monitoring and reporting program as to a specific Discharger. Any such modification or rescission must comply with California Water Code section 13269 or 13267.

*for Lisa H. McCann*  
Roger W. Briggs, Executive Officer

*May 21, 2008*  
Date

**Monitoring and Reporting Program Timber Harvest Activities**  
**Order NO. R3-2005-0066**

Exhibits:

**Exhibit 1**

Inspection Report(s)  
Copy of the Timber Harvest Plan Information Form and Fact Sheet  
Eligibility Criteria

**Exhibit 2**

Monitoring Locations

**Exhibit 3**

Big Creek Road Inventory Program  
Standard Operating Procedure 5.2.3 Photo Documentation Procedure  
Standard Operating Procedures Continuous Temperature Monitoring  
Standard Operating Procedures Instream Turbidity Monitoring

S:\NPS\Timber Harvest\Case Files by Site\1-07-143 SCR Whitehouse THP\MRPTIII1-07-143SCRWhitehouseTHP5\_21\_08.doc

Exhibit 1

Inspection Report(s)  
Copy of the Timber Harvest Information Form and Fact Sheet  
Eligibility Criteria



# California Regional Water Quality Control Board

## Central Coast Region



Linda S. Adams.  
Secretary for  
Environmental Protection

895 Aerovista Place, Suite 101, San Luis Obispo, California 93401-7906  
(805) 549-3147 • Fax (805) 543-0397  
<http://www.waterboards.ca.gov/centralcoast>

Arnold Schwarzenegger  
Governor

February 11, 2008

Leslie Markham, Resource Manager  
Northern Region Headquarters  
[santarosareviewteam@fire.ca.gov](mailto:santarosareviewteam@fire.ca.gov)

BY E-MAIL

Dear Ms. Markham:

### PREHARVEST INSPECTION (PHI) OF TIMBER HARVEST PLAN (THP) 1-07-143 SCR WHITEHOUSE THP, SANTA CRUZ COUNTY

#### Key Information

Inspection Date	January 10, 2007 <sup>2008</sup>	Present (4)	Affiliation
Plan Size (acres)	80	Scott Bullock	California Department of Forestry and Fire Protection
Yarding Type	Tractor Rubber Tire Skidder		
Watershed	Cascade Creek	Michael Huyette	California Geologic Survey
Sub drainages	Whitehouse Creek		
303(d) Listed	No	Matt Dias*	Big Creek Lumber Company
Fisheries	Steelhead		
Landowners	Big Creek Lumber Sterling Trust Company Trustees Greg Carrasco Glenda Andino	Julia Dyer	Central Coast Regional Water Quality Control Board

\*Registered Professional Forester (RPF) that signed the THP.

#### Location

The Whitehouse THP property is located in the Cascade Creek watershed approximately four miles northeast of Franklin Point, California.

#### History

The 80-acre management area is dominated by second-growth redwood timber that regenerated following clear-cut activities that took place at the turn of the century. The

California Environmental Protection Agency



1980s mark the most recent harvest on the Whitehouse THP, which focused on the removal of residual first growth redwood/fir and thinning second growth timber.

## **Inspection**

Central Coast Regional Water Quality Control Board (Water Board) staff attended the January 10, 2008 inspection as part of the California Department of Forestry and Fire Protection's (CDF) review team preharvest inspection of the Whitehouse THP property. The review team's visual inspection included a majority of the roads, skid trails, landings, and watercourse crossings contained within the THP area.

The proposed harvest includes four new landings, new road construction, and cross falling of trees over Class II and III watercourses. Water Board staff inspected the proposed monitoring site locations for photo, turbidity, and temperature monitoring. Water Board staff and the RPF agree that appropriate photo and turbidity monitoring sites include crossing M3, a skid trail crossing of a Class II watercourse and crossing M6, a culvert crossing proposed for replacement with a bridge. Temperature monitoring shall include a probe at crossing M3 as the upstream station and a probe at the western property line as the downstream station.

During the inspection, Water Board staff identified a collection of non-forest debris at several locations throughout the Whitehouse THP property. All debris, with the exception of intact culverts stored for emergency crossing repair purposes, should be removed from the property (Recommendation #1). If the RPF or landowner discovers any contamination (i.e. visual or odor) in the vicinity of the dump or elsewhere on the property, they should report the conditions to Water Board staff promptly. In addition, all cans, bottles, fuel drums, derelict equipment, plastics, and other non-forest debris present elsewhere on the plan shall be collected and properly disposed offsite.

Additionally, Water Board staff observed several poorly drained roads throughout the plan area. Prior to the first winter period after the commencement of timber operations all roads (temporary or seasonal) should be properly drained (Recommendation #2).

### Crossing M6

Crossing M6 is a 48" culvert crossing of a Class III watercourse in the south-east area of the plan. On page 16 of the THP, the Registered Professional Forester describes the crossing:

"An existing 48" [Corrugated Metal Pipe] on a class III watercourse that is in disrepair and shall be replaced with a free spanning bridged crossing compatible with light vehicle use. This crossing shall not be used during hauling operations. The bridge shall consist of either a decked flatcar, boxcar, I beam or cant constructed bridge.

Excavation of the existing crossing shall entail removal of the 48" culvert and portions of a vehicle that was keyed into the fill-slopes of the crossing as armoring. The fill material shall be pulled back to approximately 1.5:1 to provide for a stable configuration. Existing large woody material currently present below the [Corrugated Metal Pipe] shall remain in place to perform as a grade control and prevent and minimize head-cutting upstream of the crossing. The retention of the large woody material shall perform as a metering device for stored sediment upstream of the crossing and to allow for the contiguous input of large woody debris into the stream system over time. The lack of this sediment metering would result in sizeable flushes of sediment input into the stream system during heavy ephemeral flows as evidenced by the rust lines visible within the existing culvert."

Based on Water Board staff's site inspection, Water Board staff characterizes crossing M6 as a culverted crossing of a Class III watercourse. The Class III watercourse approaches the inlet of the existing undersized culvert at an acute angle. The channel experiences a significant change in grade from the inlet to the outlet of the culvert. The right bank of the channel downstream of the outlet of the culvert exhibits signs of active erosion. These conditions indicate that the culvert, at the time of installation, forced the watercourse to deviate from its natural drainage pattern.

Water Board staff has serious concerns that the replacement of this crossing as described could pose a significant adverse effect on the environment (Title 14, CCR, Ch 4, §1037.5(b)). The description of the crossing (both existing conditions and proposed replacement) is too vague for Water Board staff to make an accurate conclusion as to the potential threat to water quality and its beneficial uses. This vague description provides Water Board staff with little assurance that the replacement will

protect the downstream system from receiving sizeable flushes of sediment during heavy ephemeral flows or head-cutting upstream of the crossing after the replacement.

The THP does not reference a consultation or assessment by a fluvial geomorphologist for this crossing. The THP lacks a proper characterization of existing site conditions, design specifications for the replacement structure or grade control structure (including 100-year flow calculations), detailed sketch of the replacement structure or grade control structure, an active construction plan, or a monitoring and maintenance plan for the structures once installed.

Based on the site inspection of crossing M6 and the vague description of the crossing treatment, Water Board staff recommends that RPF update the THP to include proper characterization of existing site conditions at the M6 crossing, including a detailed tape and compass survey of the acute angle approach of the watercourse to the inlet of the existing culvert and the significant change in watercourse grade from the inlet to the outlet of the culvert (Recommendation #3).

Water Board staff also recommends that the RPF update the THP to include design specifications for the replacement structure and grade control structure (including 100-year flow calculations per Title 14, CCR, Ch 4, §923.3(e)), a detailed drawing of the replacement structure and grade control structure, an active construction plan, and a monitoring and maintenance plan for the installed structures (Recommendation #4).

Water Board staff also recommends that the design specifications include a detailed description of how the project will restore the natural drainage pattern of the watercourse (Title 14, CCR, Ch 4, §923.2(h)) and prevent sizeable flushes of sediment during heavy ephemeral flows or head-cutting upstream of the crossing. If restoring the watercourse to its natural drainage pattern is inappropriate or infeasible for this crossing, the RPF should justify maintaining the current drainage pattern of the watercourse (Recommendation #5).

Water Board staff recommends a focused PHI with a fluvial geomorphologist at the M6 crossing (Recommendation #6). Recommendations from the fluvial geomorphologist should be incorporated into the characterization of existing site conditions, design specifications for the replacement structure and grade control structure, detailed sketch of the replacement structures, active construction plan, and the monitoring and maintenance plan for the structures once installed.

According to the THP, "Crossing [M6] shall not be used during hauling operations" meaning that the bridge is proposed for installation after the conclusion of timber harvest activities. This suggests the replacement crossing will be used to serve

purposes other than forest management activities (Title 14, CCR, Ch 4, §926.23(d)). Therefore, Water Board staff recommends that the RPF coordinate with Santa Cruz County staff to provide design standards and applicable policies, including County grading and bridge permits for the M6 crossing (Recommendation #7).

## **Summary of Recommendations**

Recommendation #1: Remove all non-forest debris from the project area.

Recommendation #2: Prior to the first winter period after the commencement of timber operations all roads (temporary or seasonal) should be properly drained.

Recommendation #3: The RPF update the THP to include proper characterization of existing site conditions at the M6 crossing, including a detailed tape and compass survey of the acute angle approach of the watercourse to the inlet of the existing culvert and the significant change in watercourse grade from the inlet to the outlet of the culvert.

Recommendation #4: The RPF update the THP to include design specifications for the replacement structure and grade control structure (including 100-year flow calculations per Title 14, CCR, Ch 4, §923.3(e)), detailed drawing of the replacement structure and grade control structure, an active construction plan, and a monitoring and maintenance plan for the installed structures.

Recommendation #5: The design specifications and described in Recommendation #4 should include a detailed description of how the project will restore the natural drainage pattern of the watercourse (Title 14, CCR, Ch 4, §923.2(h)) and prevent sizeable flushes of sediment during heavy ephemeral flows or head-cutting upstream of the crossing. If restoring the watercourse to its natural drainage pattern is inappropriate or infeasible for this crossing, the RPF should justify maintaining the current drainage pattern of the watercourse

Recommendation #6: CDF conduct a focused PHI with a fluvial geomorphologist at the M6 crossing.

Recommendation #7: The RPF shall coordinate with Santa Cruz County staff to provide design standards and applicable policies including County grading and bridge permits for the M6 crossing.

## **Forest Practice Rules Cititations**

Title 14, California Code of Regulations, Chapter 4:

§926.23(d) Contents of Plan [Santa Cruz County]

"The RPF shall include within the notice to the landowner section of the plan the following statement: "Section 16.22.030 of the County Code states that any road or bridge constructed pursuant to a Timber Harvest Permit [sic: Plan] issued by the State of California, if used to serve purposes other than forest management activities shall be considered new and shall be subject to all County design standards and applicable policies including County grading and bridge permits.""

§923.2(h) Road Construction [All Districts]:

"Drainage structures and facilities shall be of sufficient size, number and location to carry runoff water off of roadbeds, landings and fill slopes. Drainage structures or facilities shall be installed so as to minimize erosion, to ensure proper functioning, and to maintain or restore the natural drainage pattern. Permanent watercourse crossings and associated fills and approaches shall be constructed where feasible to prevent diversion of stream overflow down the road and to minimize fill erosion should the drainage structure become plugged."

§923.3(e) Watercourse Crossings [All Districts]

"All permanent watercourse crossings that are constructed or reconstructed shall accommodate the estimated 100-year flood flow, including debris and sediment loads."

§1037.5(b) Review Teams to be Established

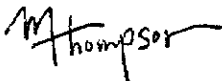
"Review Team Function: The function of the review team shall be to assist the Director in determining if plans are in conformance with Board rules and to evaluate the potential environmental impacts of timber operations. Review criteria employed by a team shall be consistent with this function. The Board's regulations provide direction for those situations noted during the review which are not addressed by specific rules (14 CCR 898.1(f), 901- 903.2, 1655 & PRC 4555). In evaluating a plan, the review team shall review any discussion of feasible alternatives or additional mitigation to the proposed timber operation as prescribed in 14 CCR 898. Plan reviewers must consider the economic as well as the environmental benefits of feasible alternatives. The review team shall serve in an advisory capacity to the Director in making recommendations on plans. In the event that any member of the review team concludes that the plan as filed would have a significant adverse effect on the environment, that member shall explain

February 11, 2008

and justify this conclusion in writing as specifically as possible. The member shall provide in writing suggested site-specific mitigation measures, if any, that will substantially lessen the impacts."

If you have questions, you may e-mail or call **Julia Dyer** at [jdyer@waterboards.ca.gov](mailto:jdyer@waterboards.ca.gov) or 805-594-6144.

Sincerely,



for Roger W. Briggs  
Executive Officer

Note - Regional Board staff photographed the site.

S:\NPS\Timber Harvest\Case Files by Site\1-07-143 SCR Whitehouse THP\PH11-07-143SCRWhitehouseTHP01\_10\_08.doc

E-mail: Matt Dias, Big Creek  
[mattd@big-creek.com](mailto:mattd@big-creek.com)

Brenda Blinn, California Department of Fish and Game  
[bblinn@dfg.ca.gov](mailto:bblinn@dfg.ca.gov)

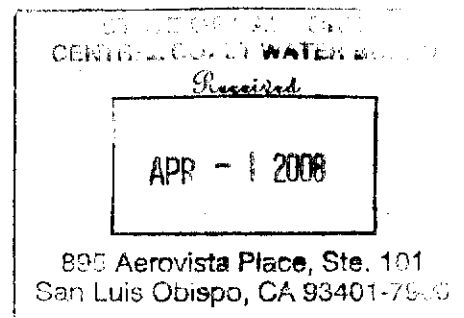
C. Michael Huyette, California Geological Survey  
[Michael.huyette@fire.ca.gov](mailto:Michael.huyette@fire.ca.gov)

Donna Bradford, County of Santa Cruz  
[donna.bradford@co.santa-cruz.ca.us](mailto:donna.bradford@co.santa-cruz.ca.us)



**BIG  
CREEK**

"Growing Redwoods for the Future"



Roger Briggs, Executive Officer  
c/o Julia Dyer  
Central Coast Regional Water Quality Control Board  
865 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401

Date: March 18<sup>th</sup>, 2007

**REQUEST FOR ENROLLMENT UNDER THE GENERAL CONDITIONAL  
WAIVER OF WASTE DISCHARGE REQUIREMENTS - TIMBER HARVEST  
ACTIVITIES IN THE CENTRAL COAST REGION.**

Dear Mr. Briggs,

As the landowner(s) of the following Timber Harvest Plan (THP) or Nonindustrial Timber Management Plan (NTMP), I would like to request coverage under the General Conditional Waiver of Waste Discharge Requirements – Timber Harvest Activities in the Central Coast Region.

<b>THP/NTMP #:</b>	THP 1-07-143 SCR
<b>Plan Name as written in the THP / NTMP:</b>	Big Creek Lumber Company, Greg Carrasco, Sterling Trust Company Trustees, Glenda Andino
<b>Unit name(s) or number(s): (For NTMPs only)</b>	

This THP / NTMP was approved by the California Department of Forestry on:

**This plan has not yet been approved, but public comment has closed, allowing for application acceptance as per the "Timber Harvest Update Follow-up Regular Board Meeting September 7-8 2006" letter from Staff. Enrollment under the General Waiver shall not occur until plan approval by CDF. The RPF shall fax a copy of the "Greensheet" to Staff upon approval.**

(note: If a water quality based non-concurrence has not been resolved, then the applicant must apply for an individual waiver)

As requested, I have attached/or shall be supplied upon approval the following documents:

Revised 6/14/06

- A complete, accurate, and signed Timber Harvest Plan Information Form and Timber Harvest Plan Fact Sheet (Form and Fact Sheet).
- A site map with proposed monitoring points, proposed monitoring route, creeks, landings, skid trails, roads, and mitigation points clearly identified and labeled.
- A site map with slides and EHR areas identified with roads and skid trails.
- Proof of CDF approval of the THP/NTMP (copy of the "green sheet").

I certify that the information contained in the Form and Fact Sheet and on the site map accurately represents site conditions on the property. I also acknowledge that I am ultimately responsible for all activities that occur on my property.

Landowner(s) Signature\*: Glenda Andino Date: 3-24-08  
Glenda Andino

\*Must receive original signature, blue ink preferred.



- A complete, accurate, and signed Timber Harvest Plan Information Form and Timber Harvest Plan Fact Sheet (Form and Fact Sheet).
- A site map with proposed monitoring points, proposed monitoring route, creeks, landings, skid trails, roads, and mitigation points clearly identified and labeled.
- A site map with slides and EHR areas identified with roads and skid trails.
- Proof of CDF approval of the THP/NTMP (copy of the "green sheet").

I certify that the information contained in the Form and Fact Sheet and on the site map accurately represents site conditions on the property. I also acknowledge that I am ultimately responsible for all activities that occur on my property.

Landowner(s) Signature\*:

Helen M. Jones  
Helen Jones, Sterling Trust Company Trustees

Date:

03-24-08

\*Must receive original signature, blue ink preferred.

- A complete, accurate, and signed Timber Harvest Plan Information Form and Timber Harvest Plan Fact Sheet (Form and Fact Sheet).
- A site map with proposed monitoring points, proposed monitoring route, creeks, landings, skid trails, roads, and mitigation points clearly identified and labeled.
- A site map with slides and EHR areas identified with roads and skid trails.
- Proof of CDF approval of the THP/NTMP (copy of the "green sheet").

I certify that the information contained in the Form and Fact Sheet and on the site map accurately represents site conditions on the property. I also acknowledge that I am ultimately responsible for all activities that occur on my property.

Landowner(s) Signature\*

  
Frank McCrary

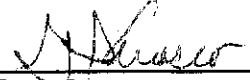
Date:

3/21/08

\*Must receive original signature, blue ink preferred.

- A complete, accurate, and signed Timber Harvest Plan Information Form and Timber Harvest Plan Fact Sheet (Form and Fact Sheet).
- A site map with proposed monitoring points, proposed monitoring route, creeks, landings, skid trails, roads, and mitigation points clearly identified and labeled.
- A site map with slides and EHR areas identified with roads and skid trails.
- Proof of CDF approval of the THP/NTMP (copy of the "green sheet").

I certify that the information contained in the Form and Fact Sheet and on the site map accurately represents site conditions on the property. I also acknowledge that I am ultimately responsible for all activities that occur on my property.

Landowner(s) Signature\*:  Date: 3-20-08  
Greg Carrsaco

\*Must receive original signature, blue ink preferred.

# Timber Harvest Plan Information Form

## 1. Plan or Notice Name:

## Plan Number:

Whitehouse THP

1-07-143 SCR

## 2. Landowner's Contact Information:

Name: **Big Creek Lumber Company**

Address: **3564 Highway 1**

City: **Davenport**

State **CA**

Zip Code **95017**

Phone: **(831)457-6390**

E-mail address (optional):

Name: **Glenda Andino**

Address: **2780 Miranda Ave.**

City: **Alamo**

State **CA**

Zip Code **94507**

Phone: **(925) 934-5152**

E-mail address (optional):

Name: **Greg Carrasco**

Address: **16 Toyon Court**

City: **Sausalito**

State **CA**

Zip Code **94965**

Phone: **(925) 934 - 5152**

E-mail address (optional):

Name: **Sterling Trust Company  
Trustees**

Address: **1020 Dolorita Ave.**

City: **Glendale**

State **CA**

Zip Code **91208**

Phone: **(818) 249-8240**

E-mail address (optional):

## 3. Name and Phone Number of Contact Person(s):

Name: **Matt Dias**

Phone: **(831) 457-6390**

Name:

Phone: **( )**

## 4. Registered Professional Forester:

RPF Name/Signature: <b>Matt Dias</b>		RPF Number: <b>RPF #2773</b>	
Address: <b>3564 Highway 1</b>			
City: <b>Davenport</b>		State: <b>CA</b>	Zip Code: <b>95017</b>
Phone: <b>(831) 457-6390</b>		E-mail address (optional): <b>mattd@big-creek.com</b>	


\*Must receive original signature, blue ink preferred.

**5. Certification:**

I, the Landowner named above, hereby certify under penalty of perjury that the CDF-approved plan or CDF-accepted notice and the accompanying fact sheet accurately represent site conditions and I understand that, as the Landowner, I am ultimately responsible for all activities that occur on my property. I also understand that I am ultimately responsible for compliance with all conditions of any Waste Discharge Requirements or Waiver of Waste Discharge Requirements issued for the above-referenced activity.

Signature\*: *Glenda Andino*

Date: *3-24-08*

Glenda Andino

**5. Certification:**

I, the Landowner named above, hereby certify under penalty of perjury that the CDF-approved plan or CDF-accepted notice and the accompanying fact sheet accurately represent site conditions and I understand that, as the Landowner, I am ultimately responsible for all activities that occur on my property. I also understand that I am ultimately responsible for compliance with all conditions of any Waste Discharge Requirements or Waiver of Waste Discharge Requirements issued for the above-referenced activity.

Signature\*: 

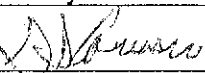
Frank McCrary

Date: 

**5. Certification:**

I, the Landowner named above, hereby certify under penalty of perjury that the CDF-approved plan or CDF-accepted notice and the accompanying fact sheet accurately represent site conditions and I understand that, as the Landowner, I am ultimately responsible for all activities that occur on my property. I also understand that I am ultimately responsible for compliance with all conditions of any Waste Discharge Requirements or Waiver of Waste Discharge Requirements issued for the above-referenced activity.

Signature\*:



Date:

3-20-08

Greg Carrsaco



**5. Certification:**

I, the Landowner named above, hereby certify under penalty of perjury that the CDF-approved plan or CDF-accepted notice and the accompanying fact sheet accurately represent site conditions and I understand that, as the Landowner, I am ultimately responsible for all activities that occur on my property. I also understand that I am ultimately responsible for compliance with all conditions of any Waste Discharge Requirements or Waiver of Waste Discharge Requirements issued for the above-referenced activity.

Signature\*:

*Helen M. Jones*

03-29-11  
Date:

Helen Jones, Sterling Trust Company Trustees

Attachments:

- Timber Harvest Plan Fact Sheet
- Site map with all proposed monitoring points, proposed monitoring route, creeks, landings, skid trails, roads, and mitigation points clearly identified and labeled.
- Site map with slides and EHR areas identified with roads and skid trails.
- Proof of CDF approval of the THP/NTMP (copy of the "green sheet").

## Timber Harvest Plan Fact Sheet

The following supplemental information will be used in the approval process of the above-referenced Timber Harvest activity.

### 1. Timber Harvest Plan

Name: <b>Whitehouse THP</b>	Number: <b>1-07-143 SCR</b>
Location: <b>Portions of Sec. 9 &amp; 10 T9S – R4W MDB&amp;M</b>	

### 2. Responsible Parties

Name: <b>Same as reported landowners on Timber Harvest Plan Information Form</b>		
Address:		
City	State	Zip Code
Phone:	E-mail address (optional):	
Land Owner		
Address:		
City	State	Zip Code
Phone:	E-mail address (optional):	
Timber Owner (if different from Land Owner): <b>Same as reported landowners on Timber Harvest Plan Information Form</b>		
Address:		
City	State	Zip Code
Phone:	E-mail address (optional):	
Forester: <b>Matt Dias, RPF #2773</b>		
Address:		
<b>3564 Highway 1</b>		
City:	State:	Zip Code:
<b>Davenport</b>	<b>CA</b>	<b>95017</b>
Phone:	E-mail address (optional):	
<b>(831) 457-6390</b>	<b>mattd@big-creek.com</b>	

### 3. Timber Harvest Plan Summary

#### a) THP size and watershed size

Acreage of THP (parcel size): <b>80</b>
Acreage to be harvested (during this conditional waiver enrollment period): <b>80</b>
Watershed Name (e.g. Pajaro, San Lorenzo, etc.) <b>Whitehouse Creek</b>
Planning Watershed Name and #: <b>Cascade Creek Planning Watershed Calwater 2.2# 3304.200002</b>
Total acres in planning watershed: <b>5,894</b>
Acres harvested in planning watershed in last 15 years: <b>75 acres</b>
Acres currently proposed for harvest in the planning watershed in addition to this proposed harvest (include any approved NTMPs): <b>0</b>

#### b) Logging Technique (Yarding) (check all applicable)

Ground based (skidding, long line): <b>X</b>	Cable Yarding:	Helicopter:
--	----------------	-------------

#### c) Roads

Existing Roads (number/length): <b>5 existing seasonal roads with a linear distance of 6,440 feet.</b>	Watercourse Crossings:			
New Roads (number/length): <b>One short segment (approximately 200 feet) of proposed road to access Landing L1 is approved.</b>		Total	Perm <b>4</b>	Temp
Reconstructed Roads (number/length): <b>A short segment of approximately 30 feet of road will be reconstructed.</b>	Class I:	<b>0</b>	<b>0</b>	<b>0</b>
Roads in unstable areas? (YES/NO) If yes, explain: <b>No roads are located on areas deemed unstable.</b>	Class II:	<b>0</b>	<b>1</b>	<b>0</b>
	Class III:	<b>0</b>	<b>3</b>	<b>0</b>
Roads in WLPZ? (YES/NO) If yes, # of feet and explain: <b>Yes, approximately 785 feet of existing rocked road proposed for hauling is located within a WLPZ.</b>				
# of feet of roads in High EHR: <b>0 feet</b> Extreme EHR: <b>0 feet</b>				
# of feet of roads decommissioned: <b>0 feet of road decommissioning is proposed.</b>				
Any decommissioned in high/extreme EHR? (YES/NO) If yes # of feet in:	High EHR: <b>No</b> Extreme EHR: <b>No</b>			

#### d) Skid Trails (If the plan contains areas with unmapped skidtrails, please indicate the acreage of these areas.)

Existing skid trails (number/length): <b>25 with approximately 8,725 linear feet</b>	Skid Trail Watercourse Crossings:
--	-----------------------------------

New trails (number/length): <b>All trails proposed for use are existing.</b>		Total	Perm	Temp
Reconstructed Roads (number/length):	Class I:	1	0	1 (M3)
Skid Trails in WLPZ (YES/NO)?	Class II:	0	0	0
If yes, explain: <b>Yes, see Mitigation Points.</b>	Class III:	0	0	0
Trails in unstable areas (YES/NO)? If yes, explain: <b>None</b>				
# of feet of skids in High EHR: <b>2,564</b> Extreme EHR: <b>250</b>				
# of feet of skids decommissioned: <b>None</b>				
Any tractor operations in areas with high/extreme EHR with no flagged or marked skid? (YES/NO)	High EHR: Extreme EHR:			
If yes, # of acres in: <b>No</b>				

#### e) Landings

# of landings decommissioned: <b>0</b>
Existing landings (number): <b>There are 2 existing landings.</b>
New Landings (number): <b>4 landings are proposed, none &gt;1/4 acre.</b>
Reconstructed Landings (number): <b>0</b>
Landings in unstable areas? (YES/NO) If yes, explain: <b>0</b>
Landings in WLPZ? (YES/NO) If yes, explain: <b>0 landings located within WLPZ or ELZ.</b>

#### f) Stream Classes

# of each type of stream:	Linear feet of stream:
I: <b>1 Class I Stream</b>	I: <b>497 linear feet of Class I Watercourse</b>
II: <b>1 Class II Stream</b>	II: <b>1,907 linear feet of Class II Watercourse</b>
III: <b>2 Class III Streams</b>	III: <b>1,835 linear feet of Class III Watercourse.</b>

#### g) Winter operations (YES/NO)?

If yes, summarize (include information from item 23 of the THP, dates of operation (when is drop dead date?), and a map showing potential areas of operation).  
Winter operations except on all-season roads automatically place a plan in Tier III monitoring:

##### Winter Period Operating Plan

This plan is located in a planning watershed with threatened and impaired values and occupied by Red-legged frogs. (Cascade Creek). This means the effective winter period is from October 15th to May 1. "Winter Period" for this THP shall refer to October 15<sup>th</sup> – May 1<sup>st</sup>.

1. Erosion Hazard rating: The EHR has been determined to be Moderate, High and Extreme. The plan area shall be treated as if

the entire area has an EHR of a minimum of High EHR and Extreme for areas designated as Extreme EHR for purposes of soil stabilization as per THP Item 18. Refer to the EHR worksheets located in Section V and Erosion Hazard Map in THP Section V for more information on the soil types.

2. Mechanical site preparation methods: None
3. Yarding System: Ground based equipment operations are proposed from October 16<sup>th</sup> – December 1st, specifically: skidding/yarding, trucking, log loading, falling, re-construction of logging roads, tractor roads or landings, lopping, light vehicle access (pick-up trucks or smaller vehicles such as quad-runners), and erosion control structure installation.

4. Operating Period: The operating periods for this plan will be:  
General Logging Season: May 1 - October 15

October 15<sup>th</sup> – December 1 (or a trigger of an accumulation of >1/4 in. of precipitation as recorded @ <http://cdec.water.ca.gov/cgi-progs/queryF?LAH>): Operations referred to under Yarding System are proposed through this time period.

October 16 – December 1 (or a trigger of an accumulation of 4 in. of precipitation as recorded @ <http://cdec.water.ca.gov/cgi-progs/queryF?LAH>): Hauling shall be allowed on seasonal and permanent roads.

December 1 - May 1: Falling, lopping, tree planting, and erosion control will occur in the harvest area only. ATV's, foot traffic, and other light tracking vehicles will be allowed to access the property.

5. Erosion Control facilities timing:
  - a. The location of all waterbars shall be flagged by the RPF prior to the start of the winter period.
  - b. Erosion control structures shall be installed on landings and truck roads prior to the end of the day if the National Weather Service forecasts a 30% or more chance of rain before the next day or prior to any weekend or other shutdown period (as per 14 CCR 914.6(a)(2)).
  - c. Erosion control structures for roads in use will consist of rolling dips or waterbars.
  - d. All tractor roads shall have drainage facilities installed following completion of yarding and prior to either (1) the start of any rain which causes overland flow across or along the disturbed surface within a WLPZ or within any ELZ designated

- for watercourse or lake protection, or (2) any day with a National Weather Service forecast of a chance of rain of 30% or more, a flash flood warning, or a flash flood watch.
- e. Landings used in the winter period will be seeded with a suitable variety at 30 lbs. per acre and straw mulched to a depth of 3" or tractor packed with slash upon completion of the use of that landing within the winter period.
6. Consideration of form of precipitation: Rain
7. Ground conditions: Tractor operations shall only occur during periods prior to an accumulation of  $\frac{1}{4}$ " of measurable precipitation as recorded @ <http://cdec.water.ca.gov/cgi-progs/queryF?LAH>.
8. Silvicultural system: Single Tree Selection as per 14 CCR 913.8(a)
9. All operations within the WLPZ or ELZ shall be completed by December 1 (or a trigger of an accumulation of  $>\frac{1}{4}$ " of precipitation as recorded @ <http://cdec.water.ca.gov/cgi-progs/queryF?LAH> with the exception of falling, hauling on seasonal or permanent roads, lopping, tree planting, and erosion control, which will extend to May 1.
10. The following are additional equipment limitations during the winter period:
- a. Not more than two skid trails (refers only to trails  $> 300$  feet in length) per piece of skidding equipment shall be open (i.e. not waterbarred) at any time.
- b. Operation of trucks and heavy equipment on roads and landings shall be limited to those with a stable operating surface.
- c. All road, skid trail, and landing construction shall occur prior to the onset of the wet season (see below for the definition of the wet season)
- d. All ground based yarding and skidding activities shall occur prior to the onset of the wet season
- e. During the wet season, hauling and loading of logs shall occur during daylight hours only
- f. Trees shall be felled away from riparian habitat including springs, seeps, bogs, and other wet areas of saturated ground

where feasible. To improve the safety of operations or to better protect residual vegetation and the beneficial uses of water within the watercourse, trees may be felled toward or parallel

to a watercourse within a WLPZ.

- g. Prior to operations during the winter period, all materials, including but not limited to straw mulch, seed, waddles, or slash accumulations, shall be prepositioned in locations to allow for rapid and timely treatment application of erosion control measures pursuant to this winter operating plan.

11. Known Unstable areas: Operations on unstable areas in the winter period will be limited to felling, bucking, logging, tree planting, and erosion control.

12. For purposes of protection to the red-legged frog, the wet season begins with the first frontal system that results in at least ¼ inch of precipitation after October 15<sup>th</sup> and extends through April 15<sup>th</sup> as per THP Item 32.

**h) Erosion Hazard (check all applicable)**

Medium: X

High: X

Extreme: X

**i) Percent Canopy Retained in the Watershed & Lake Protection Zone (WLPZ)**

**Class I:** To protect water temperature, filter strip properties, up slope stability, and fish and wildlife values, at least 85% of the total canopy within the first 75 feet (0-75 feet) and 65% of the total canopy within of the remaining 75 feet (75-150 feet) covering the ground shall be left in a well distributed, multistoried stand composed of a diversity of species similar to that found prior to the start of operations. The residual overstory canopy shall be composed of at least 25% of the existing conifers.

**Class II:** To protect water temperature, filter strip properties, up slope stability, and fish and wildlife values, at least 50% of the total canopy covering the ground shall be left in a well distributed, multistoried stand composed of a diversity of species similar to that found prior to the start of operations. The residual overstory canopy shall be composed of at least 25% of the existing conifers.

**Class III:** At least 50% of the understory vegetation present before operations shall be left living and well distributed within the ELZ of all class III watercourses to act as a filter strip for raindrop energy dissipation and for wildlife habitat.

No-Cut Zone(s)? (YES/NO) If yes, describe: None



**j) Mitigation points (summarize or import from timber harvest plan) –  
Reference site map**

**Water Crossings:**

**MITIGATION POINT M3**

M3 is a temporary tractor crossing of Whitehouse Creek (Class I) with the use of segments of existing skid trails within Class I WLPZ. This installation and use of this temporary crossing is reliant upon the approval of a Lake or Streambed Alteration (1600) Permit by the California Department of Fish and Game.

**Temporary Class I Crossing Installation:**

- 1) Logs shall be placed upon existing instream large woody material that shall be utilized as abutments for temporary crossing. Use of the instream large woody material shall allow low flow water to freely flow below woody material (as in the watercourses present condition) and allow logs to be placed without contacting the wetted channel or streambed.
- 2) Weed free straw shall be strategically placed in areas of gaps between logs to provide for a barrier to prevent the migration of fill material from entering Whitehouse Creek.
- 3) A layer of geo-textile fabric shall be placed over weed free straw to provide for an additional barrier between fill material and Whitehouse Creek.
- 4) Fill material shall be placed over the fabric layer to provide for a skidding surface.
- 5) A brow log shall be strategically placed along the downstream edge of crossing to provide as a barrier to sediment deposits into Whitehouse Creek during the use of the crossing.
- 6) Upon removal of the temporary crossing, the LTO shall give special consideration to maintaining the bed, bank, and vegetative cover within proximity of the temporary crossing.
- 7) The temporary crossing shall be pulled with all Soil Stabilization measures in place prior to the onset of the Winter Period (October 15<sup>th</sup>).

**B) Use of Skid Trails within Class I WLPZ (Including approaches to temporary crossing):**

- 1) All trails proposed for use shall be flagged by the RPF prior to the PHI for inspection by the multidisciplinary review team.
- 2) The LTO shall not utilize any other trails, existing or not, other than as identified by the RPF.
- 3) Upon completion of use all skid trails within the Class I WLPZ shall be waterbarred to a spacing not to exceed 25 feet with the outflows directed to stable configuration.

- 4) Upon completion of use all skid trails within the Class I WLPZ shall be straw mulched with weed free straw and seeded or tractor packed with slash.
- 5) Due to the proximity of the approach of the approach of the temporary crossing to a moderately traveled road (Whitehouse Canyon Road) and the gentle nature of the slopes, a log shall be strategically placed to impede the future use of the skid trail by vehicular traffic.

**MITIGATION POINT M6 – An existing 48" CMP on a class III watercourse that is in disrepair and shall be replaced with a free spanning bridged crossing compatible with light vehicle use. This crossing shall not be used during hauling operations. The bridge shall be posted with signage indicating that light vehicle usage shall be the only allowed use of this crossing. The bridge shall consist of either a decked flatcar, boxcar, I beam or cant constructed bridge. The following conditions, as per the Streambed Alteration Agreement (1600 permit) issued by DFG, shall apply during crossing removal and construction:**

- 1) All work shall be completed prior to the onset of the Wet Season (The first frontal system producing  $\frac{1}{4}$ " of precipitation after October 1<sup>st</sup>).
- 2) All non-organic material (including culvert and car body) shall be excavated and removed from site.
- 3) Re-align the channel upslope of the crossing to a bearing of N68°E upslope for approximately 15 to soften the approach of the watercourse into the crossing.
- 4) Existing large woody material currently present below the CMP shall remain in place to perform as a grade control and prevent and minimize headcutting upstream of the crossing\*.
- 5) No trees shall be removed during crossing removal or installation.
- 6) Crossing shall be pulled to 2:1.
- 7) .5 Meter (1.6 feet) of freeboard shall be present below bridge cross members (stringers) and 100yr peak flows for passage of large woody material.
- 8) Stream channel shall be 4 feet in width.
- 9) Rock armoring shall be placed along the stream banks, focusing on the southern banks, to provide protection to abutments from bank scouring.
- 10) Rock armoring shall consist of a minimum of 12" diameter rock.
- 11) Bared soils that are not effectively covered by bridge decking or rock armoring shall be mulched with straw, grass seeding, or slash layer to prevent surface erosion or pulled slopes.
- 12) Redwood stumps shall be placed along historically scoured banks for the purposes of bank stabilization through energy dissipation and future rooting structure.

13) Review Sketches (Post Crossing Replacement Conditions of Class III Crossing at Mitigation Point M6 & Mitigation Point M6 100 Year Flow Design) for additional clarification of actions to be taken during M6 removal and installation.

14) An approved Streambed Alteration Agreement (1600 permit) by DFG is required prior to commencement of operations on M6.

\* Existing large woody material currently present below the CMP shall remain in place to perform as a grade control and prevent and minimize headcutting upstream of the crossing. The retention of the large woody material shall perform as a metering device for stored sediment upstream of the crossing and to allow for the contiguous input of large woody debris into the stream system over time. The lack of this sediment metering would result in sizeable flushes of sediment input into the stream system during heavy ephemeral flows as evidenced by the rust lines visible within the existing culvert. Based upon characteristics of the class III watercourse (Channel width, channel gradient upslope of crossing, and grade changes below crossing) the RPF estimates that there is approximately 100 – 150 cubic yards of stored sediment upslope of M6 that shall be metered out over time via the maintenance of the grade control structure.

**MITIGATION POINT X4** - Mitigation Point X4 consists of an existing 48" CMP. This culvert has experienced some minor scouring of the fills prism around the inlet of the culvert. To alleviate future scour, and potential failure of the crossing, a headwall shall be constructed. The following standards shall be met during placement of the headwall:

- 1) The headwall shall be constructed utilizing sandbag and/or Quikrete to provide for armored protection of the fill prism.
- 2) The headwall shall extend a minimum of 24" from ground level (half way up the culvert inlet) to provide protection during high flow events.
- 3) No significant modification of the stream bed or bank shall occur during the installation of the headwall.
- 4) The disturbance or removal of vegetation shall not exceed the minimum necessary to complete operations. If areas within the stream zone are disturbed or exposed as a result of construction activities, these exposed areas shall be seeded using native seeds (not containing annual ryegrass), and mulched with weed-free straw.
- 5) Construction activities shall be restricted to periods of no stream flow and dry weather.
- 6) All non-organic matter within proximity to X1 shall be removed and disposed of at a proper location.
- 7) A waterbar shall be installed along the eastern approach to the crossing to alleviate surface run off from being delivered to crossing fills.

**MITIGATION POINT X1** – An existing 48" plastic corrugated culvert located where Whitehouse Creek flows beneath Whitehouse Canyon Road. An energy dissipation system shall be installed at the outlet of the culvert to reduce the potential of scouring of the plunge pool at the outlet of the culvert. The following standards shall be met during placement of the energy dissipation system:

- 1) The energy dissipation system shall consist of 18" rock or native vegetation (ie root wads).
- 2) Construction activities shall be restricted to periods of no stream flow and dry weather.
- 3) Rock, gravel, and/or other materials shall not be imported to, taken from or moved within the bed or banks of the stream, except as directed within these directions.
- 4) Rocks or stumps shall be carefully placed on the streambanks by equipment such as an excavator or backhoe.
- 5) The disturbance or removal of vegetation shall not exceed the minimum necessary to complete operations. If areas within the stream zone are disturbed or exposed as a result of construction activities, these exposed areas shall be seeded using native seeds (not containing ryegrass), and mulched with weedfree straw.

The discarded tire that is located in the plunge pool shall be removed and properly disposed.

Roads:

Skid Trails:

**MITIGATION POINT M1**

A segment of skid trail located on 50-65% slopes with High EHR at the location designated as Mitigation Point M1. M1 is approximately 30 – 50 feet in linear distance. Following operations, or prior to the winter period, this trail segment shall be waterbarred to the specification for extreme EHR, spacing not to exceed 50 feet where feasible, and shall be drained to a stable configuration. The trail surface shall be covered with tractor-crushed slash, seeded and/or strawed following completion of use. In areas where tractor crushing is not feasible due to steep slopes, hand placement of slash will be employed. The skid trail at Mitigation Points M1 shall be flagged by the RPF or supervised designee prior to the PHI.

**MITIGATION POINT M2**

M2 consists of segment of existing skid trail that crosses a natural swale. Following operations, or prior to the winter period, this location shall be dipped out and outsloped. No berm shall remain on the outboard edge of the skid trail. This location shall also be tractor packed with slash to

provide for surface armoring and stabilization. The LTO shall focus on maintaining pre-operational drainage patterns to prevent erosion potential to downslope waters of the State.

#### **MITIGATION POINT M4**

A segment existing of skid trail located on 50-65% slopes with High EHR at the location designated as Mitigation Point M4. M4 is approximately 30 – 50 feet in linear distance. Following operations, or prior to the winter period, this trail segment shall be waterbarred to the specification for extreme EHR, spacing not to exceed 50 feet where feasible, and shall be drained to a stable configuration. The trail surface shall be covered with tractor-crushed slash, seeded and/or strawed following completion of use. In areas where tractor crushing is not feasible due to steep slopes, hand placement of slash will be employed. The skid trail at Mitigation Points M1 shall be flagged by the RPF or supervised designee prior to the PHI.

#### **MITIGATION POINT M5**

M5 is a portion of skid trail in the WLPZ of a Class II watercourse for approximately 90 feet. Heavy equipment operating in this area will be restricted to the skid trail, and the vegetation strip between the outside edge of the skid trail and the watercourse will be maintained. Slopes associated with this skid trail are <20%. Following operations the skid trail will have waterbars installed to the specification for high EHR every 50 ft. where feasible and the outflow of these waterbars will be directed onto stable ground. The skid trail surface shall be tractor packed with slash or seeded and straw mulched. Due to the proximity of this skid trail to a moderately travel road and the gentle nature of the slopes, a log shall be strategically place to impede the future use of the skid trail by vehicular traffic. Further explanation and justification is provided in THP Section III.

Other:

**MITIGATION POINT M7** – Though not listed, but may be locally rare, this occurrence of Rattlesnake plantain (*goodyera oblongifolia*) shall be protected with a 25' ELZ to prevent and minimize disturbance to this individual occurrence. The establishment of this 25' ELZ shall be communicated to the LTO prior to the commencement of operations.

Landings:

#### **k) In Lieu Practices (YES/NO)?**

If yes please explain reason(s) in lieu practices are utilized: All in lieu practices are described within the Mitigation points above.

#### **l) Water Drafting (YES/NO)?**

Drafting location(s): <b>N/A</b>
Drafting flow rate (gallons/minute): <b>N/A</b>
Other drafting in watershed (number/total flow rate estimate): <b>N/A</b>

**m) Cumulative Impact Analysis**

Threatened and Impaired for Steelhead/Coho? (YES/NO) <b>Yes</b>
303(d) Listed Waterbody (YES/NO)? <b>No</b>
If yes, what is the impairment (sediment, temperature, etc.)?:
<p><b>Sources of Cumulative Impacts (briefly describe):</b> Whitehouse Creek Road is, in some stretches, located at the bottom of a steep canyon immediately adjacent to Whitehouse Creek. This road is prone to fairly regular wintertime bank failures and/or landslides originating above the road, and resulting in sediment deposits on the road or in Whitehouse Creek. The presence of the road, along with some of the road crossings of Whitehouse Creek and other developments within the watershed, have resulted in changes to the geomorphology of the creek. These changes are unlikely to be effectively remediated without major changes in the location of the road and the ownership and use patterns of Whitehouse Canyon.</p> <p>The resident of Whitehouse Canyon have developed a road association. This association has an annual grading, surfacing, and maintenance program, which focus on the main access road within to the various residence in the canyon. Past activities of this association include crossing maintenance (cleaning and clearing of debris), grading of the road surface and placement of rock surfacing for the purpose of increasing the integrity of the running surface See THP Section IV for detailed information pertaining to cumulative impacts assessment.</p>

**n) Proposed Monitoring Points and Data**

Describe all monitoring points shown on site map:
<p>As per the attached Eligibility Criteria this project is considered Tier 1 if Winter Period Operations are not utilized. In the case where Winter Period Operations are not utilized Visual and Forensic Monitoring shall apply. In addition, the landowner or agent of the landowner, shall provide photos as discussed below for Mitigation Point M6.</p> <p>If Winter Period Operations are utilized this project is applicable for Tier III monitoring. Monitoring shall include:</p> <p>As per discussions on December 14<sup>th</sup>, 2007 with CCRWQCB Staff, Julia Dyer, Photo Point M6 - Photo monitoring shall occur at Mitigation M6. This monitoring shall included pre condition, during construction, and post construction photos to be included within the first annual report.</p>

**March 21, 2008**  
**Date of Director's Decision**

**OFFICIAL NOTICE OF THE DIRECTOR OF FORESTRY'S DETERMINATION  
OF CONFORMANCE OF TIMBER HARVESTING PLAN OR AMENDMENT TO TIMBER  
HARVESTING PLAN WITH THE FOREST PRACTICE ACT  
AND BOARD OF FORESTRY REGULATIONS**

The Director of Forestry found, on the date shown above, that the Timber Harvesting Plan, Non-Industrial Timber Management Plan (NTMP), or amendment (AM) listed below is in conformance with the Forest Practice Act, and Board of Forestry regulations pursuant thereto. This notice is posted in compliance with sections 1037.1 and 1037.8, Title 14, California Code of Regulations.

**Copies of this Harvest Document and related documents are available for inspection at: 6059 Hwy. 9, Felton, CA 95018  
(831) 335-6740.**

Plan number County	Submitter	Acres	Location	Waterway	Silviculture or Proposed Amendment
1-07-143 SCR SANTA CRUZ	BIG CREEK LUMBER COMPANY, STERLING TRUST COMPANY TRUSTEES, GREG CARRASCO, GLENDA ANDINO	80	SECS 9,10 T9S R4W MDB&M	WHITEHOUSE CREEK	SELECTION

TO POSTING AGENCY: Please post this Notice at the place where official notices concerning Environmental Quality Act compliance are usually posted. If there are questions concerning posting, please contact: Forest Practice Office, California Department of Forestry and Fire Protection, 135 Ridgway Avenue, Santa Rosa, CA 95401  
Telephone : (707) 576-2959

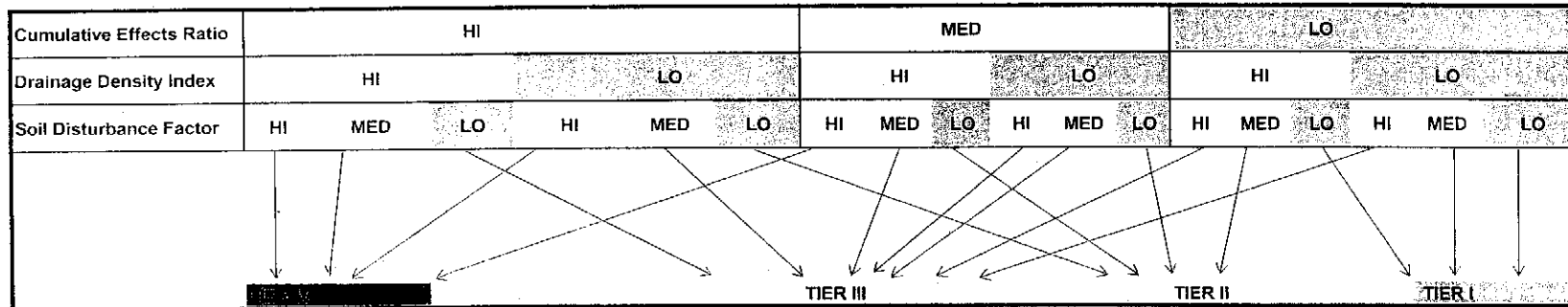
cc: RPF, TO/TLO/SUBMITTER(4), UNIT, DFG, WQ, CP, CC, DPR, SAC, RU, POST, FILE

Posting Period is 30 Days

# Eligibility Criteria

Plan No.:	1-07-143 SCR
Plan Name:	Whitehouse THP

## Regulatory and Monitoring Requirement Decision Tool



Regulatory Option

Individual WDR or Waiver

General Conditional Waiver for Timber Operations

Monitoring Requirements

Individual Monitoring

Tier III Monitoring Requirements include water column monitoring for temperature and turbidity, visual and photo monitoring of timber harvest area infrastructure, CDF Forest Practice Rules compliance monitoring, road inventory program, and forensic monitoring as necessary. Tier III monitoring is automatically required if ground based equipment is used off of an all-weather road during the period October 15 - May 1.

Tier II Monitoring Requirements include visual and photo monitoring of timber harvest area infrastructure, CDF Forest Practice Rules compliance monitoring, road inventory program, and forensic monitoring as necessary.

Tier I Monitoring Requirements include CDF Forest Practice Rules compliance monitoring, road inventory program, and forensic monitoring as necessary.

	High	Med	Low
Cumulative Effects Ratio	>15%	15% to 10%	<10%
Drainage Density Index	>100		<100
Soil Disturbance Factor	>2500	2500 to 1000	<1000

3%

89

2115

Final

Low

Low

Medium

Winter Ops Proposed - Automatic Tier III



Plan No.:	1-07-143 SCR
Plan Name:	Whitehouse THP

## Soil Disturbance Factor

Enter values in cells shaded yellow.

Silviculture	Harvest Area (ac)	Group(ac)	Selection(ac)	Corrected Sum
	Area in THP (ac)	80	80	80
Roads		Seasonal/Temporary	All weather/Permanent	
		Existing	Proposed	Existing
		x 4	x 6	x 2
				x 4
	Linear feet - Existing and proposed	6,440	200	0
				0
				337
		Class I	Class II	Class III
		x 30	x 20	x 10
	Crossings - Number and Class of watercourse crossed	0	1	3
		x 10		
	Number of feet In-lieu/Alt rule in WLPZ	785		
				79
		High	Extreme	
		x 2	x 5	
	EHR - Number of feet in high or extreme	0	0	
				0
				Roads Subtotal
				466
Skid Trails		Existing	Proposed	
		x 1.5	x 2.5	
		8,725	0	
	Linear feet - Existing and proposed			For unmapped acreage, add 100 feet per acre
		Class I	Class II	Class III
		x 10	x 7	x 3
	Crossings - Number and Class of watercourse crossed	1	0	0
		x 5		
	Number of In-lieu/Alt rule in WLPZ	200		
				1000
		High	Extreme	
		x 1.0	x 2	
	EHR - Number of feet in high or extreme	2,564	250	
				31
				Skid Trails Subtotal
				1204
Landings		Existing	Proposed	
		x 1.5	x 2.5	
	Ground-based	2	4	
				13
	Helicopter	x 1	x 2	
		0	0	
				0
	No. of In-lieu/Alt rule in	x 3	x 5	
		0	0	
				0
				Landings Subtotal
				13
FINAL SUM				
				Sub Total
				1763
				Total
				2115
	Winter Operations Proposed? Yes or No	yes		
	If yes, automatic Tier III monitoring.			

<b>Plan No.:</b>	<b>1-07-143 SCR</b>
<b>Plan Name:</b>	<b>Whitehouse THP</b>

<b>Drainage Density Index</b>					
<b>ft. of Class I</b>	<b>ft. of Class II</b>	<b>ft. of Class III</b>	<b>Corrected Sum</b>	<b>Plan Area (ac)</b>	<b>DDI</b>
497	1,907	1,835	7140	80	89

<b>Plan No.:</b>	<b>1-07-143 SCR</b>
<b>Plan Name:</b>	<b>Whitehouse THP</b>

### Cumulative Effects Ratio

Acres Proposed for Harvest or Harvested in Planning Watershed (CalWater) in last fifteen years*					
Is the proposed harvest in a 303(d) listed watershed?***	Acres to be harvested as part of proposed THP/NTMP	Sum	Total Acres in Planning Watershed	CER	
no	80	155	5,894	3%	

\* Include all acreage in proposed and approved THPs/NTMPs

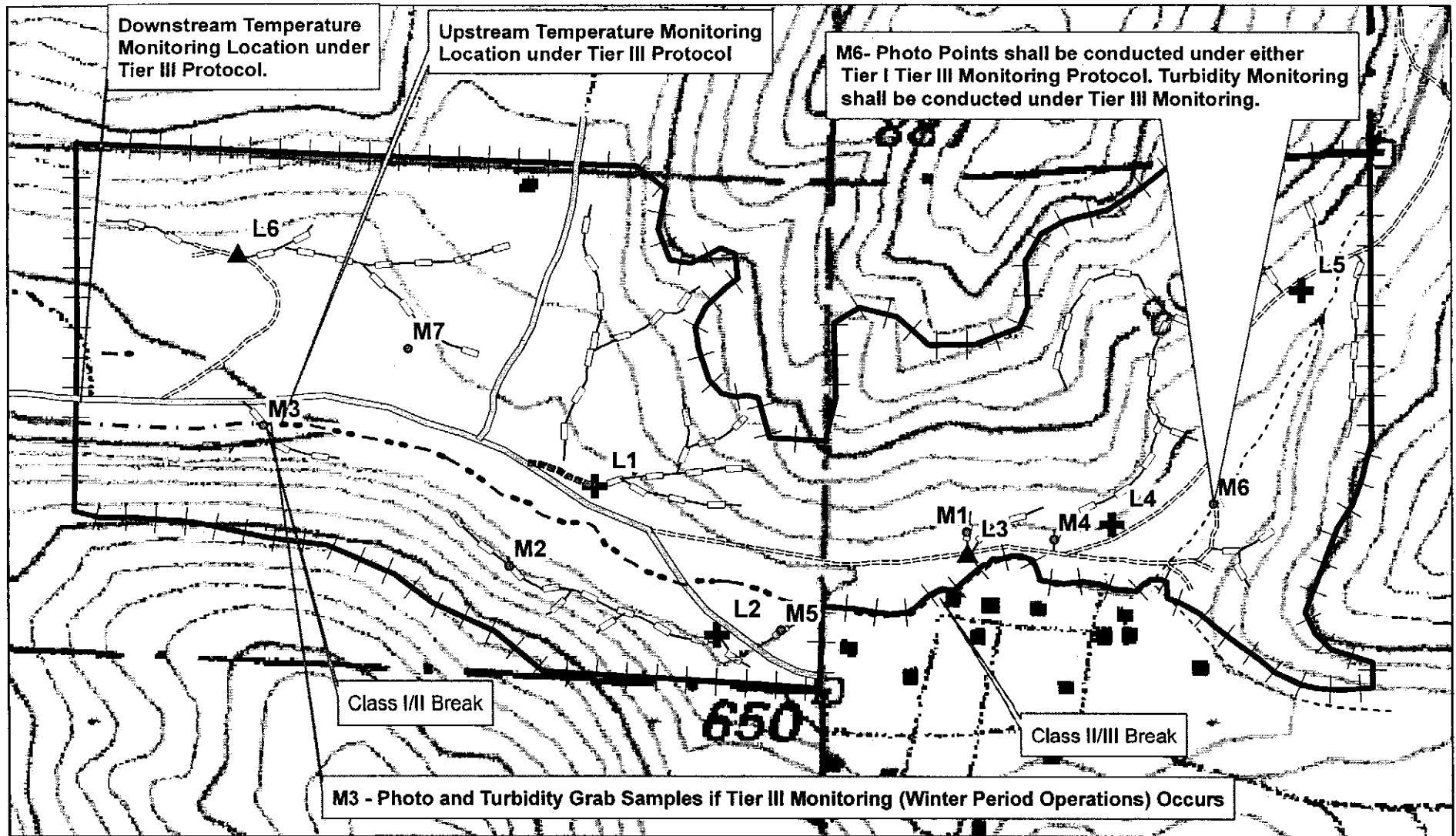
\* \*\*Watershed 303d listed as impaired from sediment or temperature?  
If yes type "yes" or leave blank.

## Exhibit 2

### Monitoring Locations

# Whitehouse Monitoring Points Map for General Conditional Waiver

Franklin Point 7.5' Quad  
Portions of Sections 9 & 10 T9S - R4W MDB&M



## Legend

### watercourse

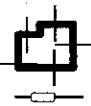
- · - Class I
- - - Class II
- - - - Class III

### Roads

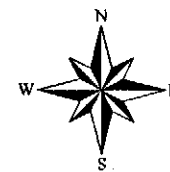
- ==== Existing Permanent
- ===== Existing Seasonal
- Proposed Seasonal

### Landings

- ▲ Existing
- + Proposed



Harvest Boundary  
skid trail



0 305 610 1,220 Feet

Exhibit 3

Big Creek Road Inventory Program

Standard Operating Procedure 5.2.3  
Photo Documentation Procedure

Standard Operating Procedures  
Continuous Temperature Monitoring

Standard Operating Procedures  
Instream Turbidity Monitoring

BIG CREEK ROAD INVENTORY PROGRAM (BCRIP)  
PROTOCOL FOR CONDUCTING COMPANY ROAD  
INVENTORIES & MAINTENANCE

Purpose

Big Creek Lumber Company owns and controls over 11,000 acres of forestlands on which there are over 60 miles of permanent, temporary, surfaced, and un-surfaced roads. Maintenance of these roads requires frequent monitoring and treatment.

This document has been drafted to provide the standard operating procedures for conducting and recording road inventories and for the use of the inventory to direct appropriate treatments. This protocol has been drafted so as to guide road inventories consistent with Big Creek goals & objectives and with the certification of Big Creek's lands with the Forest Stewardship Council (FSC).

Process of Road Inventory

Big Creek conducts road inventories on varying intervals, depending upon (1) the designated use of the road, (2) the intensity and duration of precipitation received, (3) the hydrologic activity of the stream system in the area, (4) the susceptibility of the road and appurtenant crossings to failure or damage, and (5) the interval of time since that portion of road was used.

On properties where there has been recent activity or road use, especially if road drainage was altered or improved, review of the roads is conducted more frequently. For each portion of road, Big Creek has designated a standard interval of 2 inches of rain per storm event as the cue to send out maintenance crews. The 2" standard interval is subject to change based on the relationship between the five factors listed above.

When indicated by the interval period, or when deemed necessary otherwise, an individual or group of persons will review the portion of road. Road inventory may be conducted on foot, by pickup, or (especially in wet periods) by ATV or other light-tracking vehicle. While conducting the inventory, the person or persons will do handwork, where necessary, to clear and improve drainage structures and culverts.

Each instance a portion of road is inventoried, a form is filled out recording the observations of the person (see Appendix B, Road Inventory Form). This form allows the person to record the location, date, problem, and proposed solution. This form is then submitted to the Chief Forester of Operations (CFO).

After the road inventory form is completed, it is entered into the roads inventory database (a spreadsheet which tracks observations, work completed, and dates of last review for a portion of road).

If the need for repair or maintenance is immediate, the road reviewer will immediately notify the Chief Forester of Operations so that an appropriate treatment may be planned and initiated. All road inventory forms submitted to the CFO are reviewed, and potentially urgent problems are further analyzed to determine if immediate treatment is necessary. When immediate treatment is prescribed, the project is listed with indication of urgency on a dry erase board posted in the Big Creek Forestry Office. As soon as resources are available to conduct the treatment operations, the necessary equipment, materials, and personnel are dispatched to the site.

After the site is treated, the CFO or the CFO's designee will review the site to determine the success of the treatment. This site, at an interval dependent upon the treatment, will be reviewed over time to evaluate success of treatment and to determine if follow-up treatment is necessary.

For sites that do not require immediate treatment, the records for that site will not be further reviewed until the biennial summary of roads is prepared (May 1 and November 1 of every year). At these times corresponding to the approximate end and beginning, respectively, of the winter period, the latest records for each property are reviewed and responsibility for appropriate treatments are delegated. Subsequent evaluation of the treatment's success is conducted, and follow-up treatment prescribed, if necessary.

## ELEMENTS OF THE FIVE FACTORS THAT DETERMINE INSPECTION TRIGGERS FOR THE BCRIP:

### Watershed:

- Threatened and Impaired
- 303 (D) Listed Stream Segments
- Sub-division/home proximity to project area
- Orographic effect:
  - South county vs. North county
- Project elevation, low vs. high in the watershed
- Road conditions outside of project area that contribute or receive flow
- Watercourse classifications for project area

### Porosity:

- Fast vs. slow
- Soil type - sandstone/shale/granite
- High vs. low rock content
- Ground saturation point/springs begin to flow at higher rates

### Topography:

- Steep/flat/undulating
- Indication of instabilities/ tipped trees/earth fractures/slides
- Proximity to San Andreas Fault

### Vegetative Cover Type:

- Brush/oak woodland/conifer
- General vegetative cover

### General Elements Associated with Infrastructure:

#### Age of road:

- Older vs. newer road/existing leaf cover/general vegetation cover

#### History:

- Legacy problems/old humboldt crossings
- Who designed and implemented the existing road/crossings
- Past performance and condition of general infrastructure

#### Location of road:

- Ridge top/steep ground/proximity to watercourse/roads on unstable areas

#### Road surfacing:

- Rocked/ based/seeded/straw mulched/slash packed/un-surfaced

#### Road Standard:

- Insloped/outslope/crowned/re-contoured:
- Spittler outslope of new roads
- Full bench road cut/balanced cut and fill/fill
- Through cuts/long run of through cut
- Berms on outside edge of road
- Seasonal/all winter road

#### Type of drainage and crossings:

- Waterbars/rolling dips/bridges/culverts/rocked fords
- Current condition of erosion control structures/How much do you think they can handle

#### Trespass

- 4WD/motorcycles/mountain bikes/horses/foot traffic

#### Watercourse crossing location and frequency

#### Gopher holes

#### Pig wallows/rooting

#### PG&E access road

#### EHR rating in THP



#### Weather:

- Interval of time since the last rain event
- Type of rain year/El nino/are storms holding more rain
- Jet stream status

- High pressure or low pressure

#### Wind direction:

- South East - Strong high pressure
  - South - Storm medium pressure
  - Southwest - Storm low pressure
  - East/Southeast - Strong extreme low pressure
  - West - Clearing

- Check the barometer

- Soaking, low intensity, rain vs. hard, high intensity, rain

- General weather patterns

#### Trigger Assessment Tools:

- Weather radio

- Barometer

#### Local contacts:

- Forest landowners

- Local news forecasts

#### Tell tail locations:

- Creek mouths open to the ocean

- General overland flow

- Bridge crossings of major rivers/streams/creeks throughout the county

- Etc...

#### State wide contacts

- Other foresters and forestry companies

#### California Newts:

- Moving uphill vs. downhill

- Weather web sites (rainfall, stream flow, satellite imagery, forecasts, flood warnings, etc...):

- <http://www.wrh.noaa.gov/mtr/>

- <http://www.goes.noaa.gov/>

- [http://water.usgs.gov/cgi-bin/waterwatch?map\\_type=real&state=ca](http://water.usgs.gov/cgi-bin/waterwatch?map_type=real&state=ca)

- <http://cdec.water.ca.gov/misc/realStations.html>

- [http://www.weather.com/maps/maptype/satelliteworld/pacificoceansatellite\\_large\\_animated.html?](http://www.weather.com/maps/maptype/satelliteworld/pacificoceansatellite_large_animated.html?)

- <http://www.wrh.noaa.gov/mtr/gettext.php?pi1=RR5&sid=RSA>

- <http://www.surflife.com/home/index.cfm>

- <http://weather.cnn.com/weather/forecast.jsp?locCode=SRU>

OWNERSHIP:

DATE:

NAME(S):

LOCATION:	
PROBLEM:	
CODES	
SOLUTION:	
CODES	
LOCATION:	
PROBLEM:	
CODES	
SOLUTION:	
CODES	

## PROBLEM

Cut-Bank Failure	1
Fill-Slope Failure	2
Water Bar Failure	3
Fill Failure	4
Drainage Problem	5
Cracks/Settling	6
Plugged Culvert	7
Wash-Out	8
Slide Debris/Flow	9
Trees Blocking Road	10

## SOLUTION

Replace	A
Reconstruct	B
Drain	C
Resurface	D
Remove	E
Cover	F
Mechanical	M
Hand Work	H
Temporary	T
Permanent	P

## Standard Operating Procedure 5.2.3

### Photo Documentation Procedure

#### Introduction:

Photographs provide a qualitative, and potentially semi-quantitative, record of conditions in a watershed or on a water body. Photographs can be used to document general conditions on a reach of a stream during a stream walk, pollution events or other impacts, assess resource conditions over time, or can be used to document temporal progress for restoration efforts or other projects designed to benefit water quality. Photographic technology is available to anyone and it does not require a large degree of training or expensive equipment. Photos can be used in reports, presentations, or uploaded onto a computer website or GIS program. This approach is useful in providing a visual portrait of water resources to those who may never have the opportunity to actually visit a monitoring site.

#### Equipment:

Use the same camera to the extent possible for each photo throughout the duration of the project. Either 35 mm color or digital color cameras are recommended, accompanied by a telephoto lens. If you must change cameras during the program, replace the original camera with a similar one comparable in terms of media (digital vs. 35 mm) and other characteristics. A complete equipment list is suggested as follows:

#### Required:

- Camera and backup camera
- Folder with copies of previous photos (do not carry original photos in the field)
- Topographic and/or road map
- Aerial photos if available
- Compass
- Timepiece
- Extra film or digital disk capacity (whichever is applicable)
- Extra batteries for camera (if applicable)
- Photo-log data sheets or, alternatively, a bound notebook dedicated to the project.
- Yellow photo sign form and black marker, or, alternatively, a small black board and chalk

#### Optional:

- GPS unit
- Stadia rod (for scale on landscape shots)
- Ruler (for scale on close up views of streams and vegetation)

Some safety concerns that may be encountered during the survey include, but are not limited to:

- Inclement weather
- Flood conditions, fast flowing water, or very cold water
- Poisonous plants (e.g.: poison oak)
- Dangerous insects and animals (e.g.: bees, rattlesnakes, range animals such as cattle, etc.)
- Harmful or hazardous trash (e.g.: broken glass, hypodermic needles, human feces)

We recommend that the volunteer coordinator or leader discuss the potential hazards with all volunteers prior to any fieldwork.

### General Instructions:

From the inception of any photo documentation project until it is completed, always take each photo from the same position (photo point), and at the same bearing and vertical angle at that photo point. Photo point positions should be thoroughly documented, including photographs taken of the photo point. Refer to copies of previous photos when arriving at the photo point. Try to maintain a level (horizontal) camera view unless the terrain is sloped. (If the photo can not be horizontal due to the slope, then record the angle for that photo.) When photo points are first being selected, consider the type of project (meadow or stream restoration, vegetation management for fire control, ambient or event monitoring as part of a stream walk, etc.) and refer to the guidance listed on *Suggestions for Photo Points by Type of Project*.

When taking photographs, try to include landscape features that are unlikely to change over several years (buildings, other structures, and landscape features such as peaks, rock outcrops, large trees, etc.) so that repeat photos will be easy to position. Lighting is, of course, a key ingredient so give consideration to the angle of light, cloud cover, background, shadows, and contrasts. Close view photographs taken from the north (i.e., facing south) will minimize shadows. Medium and long view photos are best shot with the sun at the photographer's back. Some artistic expression is encouraged as some photos may be used on websites and in slide shows (early morning and late evening shots may be useful for this purpose). Seasonal changes can be used to advantage as foliage, stream flow, cloud cover, and site access fluctuate. It is often important to include a ruler, stadia rod, person, farm animal, or automobile in photos to convey the scale of the image. Of particular concern is the angle from which the photo is taken. Oftentimes an overhead or elevated shot from a bridge, cliff, peak, tree, etc. will be instrumental in conveying the full dimensions of the project. Of most importance overall, however, is being aware of the goal(s) of the project and capturing images that clearly demonstrate progress towards achieving those goal(s). Again, reference to *Suggestions for Photo Points by Type of Project* may be helpful.

If possible, try to include a black board or yellow photo sign in the view, marked at a minimum with the location, subject, time and date of the photograph. A blank photo sign form is included in this document.

marker post) then have an alternate method (map, aerial photo, copy of an original photograph of the photo-point, etc).

2. Select an existing structure or landmark (mailbox, telephone pole, benchmark, large rock, etc.), identify its latitude and longitude, and choose (and record for future use) the permanent position of the photographer relative to that landmark. Alternatively, choose the procedure described in *Monitoring California's Annual Rangeland Vegetation* (UC/DANR Leaflet 21486, Dec. 1990). This procedure involves placing a permanently marked steel fence post to establish the position of the photographer.
3. For restoration, fuel reduction, and BMP projects, photograph the photo-points and carry copies of those photographs on subsequent field visits.

#### Determining the Compass Bearing:

1. Select and record the permanent magnetic bearing of the photo center view. You can also record the true compass bearing (corrected for declination) but do not substitute this for the magnetic bearing. Include a prominent landmark in a set position within the view. If possible, have an assistant stand at a fixed distance from both the photographer and the center of the view, holding a stadia rod if available, within the view of the camera; preferably position the stadia rod on one established, consistent side of the view for each photo (right or left side).
2. Alternatively, use the procedure described in *Monitoring California's Annual Rangeland Vegetation* (UC/DANR Leaflet 21486, Dec. 1990). This procedure involves placing a permanently marked steel fence post to establish the position of the focal point (photo center).
3. When performing ambient or event photo monitoring, and when a compass is not available, then refer to a map and record the approximate bearing as north, south, east or west.

#### Suggestions for Photo Points by Type of Project:

##### *Ambient or Event Monitoring, Including Photography Associated with Narrative Visual Assessments:*

1. When first beginning an ambient monitoring program take representative long and/or medium view photos of stream reaches and segments of shoreline being monitored. Show the positions of these photos on a map, preferably on the stream/shore walk form. Subjects to be photographed include a representative view of the stream or shore condition at the beginning and ending positions of the segment being monitored, storm drain outfalls, confluence of tributaries, structures (e.g., bridges, dams, pipelines, etc.).
2. If possible, take a close view photograph of the substrate (streambed), algae, or submerged aquatic vegetation.

4. Long view and medium view of streambed changes (thalweg, gravel, meanders, etc.)
5. Medium and close views of structures, plantings, etc. intended to induce these changes.
6. Optional: Use a tape set perpendicular across the stream channel at fixed points and include this tape in your photos described in 3 and 4 above. For specific procedures refer to Harrelson, Cheryl C., C.L. Rawlins, and John P. Potyondy, *Stream Channel Reference Sites: An Illustrated Guide to Field Techniques*, United States Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-245.

#### *Vegetation Management for Fire Prevention ("fuel reduction"):*

1. Aerial view (satellite or airplane photography) if available.
2. In the absence of an aerial view, a landscape, long view showing all or representative sections of the project (bluff, bridge, etc.)
3. Long view (wide angle if possible) showing the project area or areas. Preferably these long views should be from an elevated vantage point.
4. Medium view photos showing examples of vegetation changes, and plantings if included in the project. It is recommended that a person (preferably holding a stadia rod) be included in the view for scale
5. To the extent possible include medium and long view photos that include adjacent stream channels.

#### *Stream-Sediment Load or Erosion Monitoring:*

1. Long views from bridge or other elevated position.
2. Medium views of bars and banks, with a person (preferably holding a stadia rod) in view for scale.
3. Close views of streambed with ruler or other common object in the view for scale.
4. Time series: Photograph during the dry season (low flow) once per year or after a significant flood event when streambed is visible. The flood events may be episodic in the south and seasonal in the north.

## PHOTO- LOG FORM

Project:

Location:

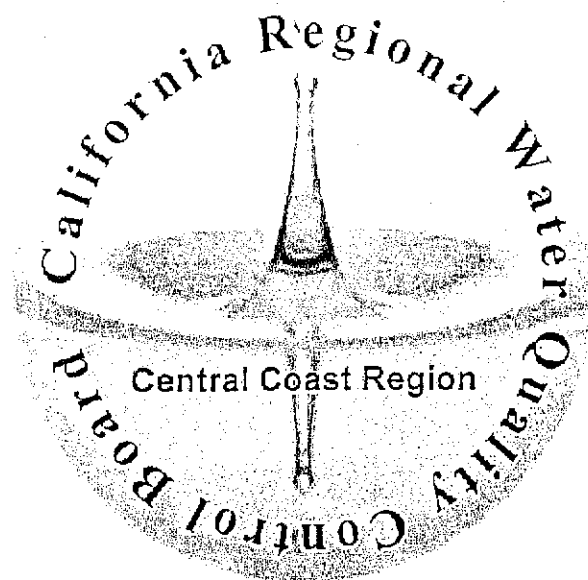
Date:

Photographer:

Team members:

Photo #	Time	Photo Point ID	Photo Pt. Description & Location	Bearing to Subject	Subject Description

General Notes or Comments (weather, cloud cover, time of sunrise and sunset, other pertinent information):



Timber Harvest Program  
Standard Operating Procedures  
Continuous Temperature Monitoring

April 2006



## Table of Contents

Purpose.....	3
Monitoring Season .....	4
Calibration Checks.....	4
Data Logger Ice Bath .....	5
Room Temperature Bath.....	5
Deployment Procedure.....	5
Mid-season Data Collection and Logger Calibration .....	6
Reporting Requirements .....	7
Literature Consulted.....	8

## Purpose

This document provides standard operating procedures for continuous temperature monitoring on forest streams pursuant to the General Conditional Waiver of Waste Discharge Requirements – Timber Harvest Activities in the Central Coast Region (General Waiver). These procedures, when followed correctly, will support the collection of continuous temperature data. The data will be used for trend analysis and to determine compliance with Monitoring and Reporting Program R3-2005-0066.

## Monitoring Season

Monitoring shall begin at the onset of timber harvest operations (i.e. tree falling, yarding, and / or roadwork, etc.) and shall be consistent with the Monitoring and Reporting Program (MRP), any conditions set forth within the waiver or waste discharge requirements, and the procedures outlined in this document. Monitoring shall continue as specified in the MRP until it is revised or rescinded.

Continuous Temperature Monitoring occurs for the five and a half month period starting May 1 and ending October 15, at all temperature monitoring locations established in the MRP. If a site becomes dry at any point during the monitoring season, the logger shall be relocated further downstream where monitoring can continue. Relocation of the logger must be documented.

If timber harvest operations commence during the period of October 16 through April 30, temperature monitoring shall begin the subsequent May 1. If timber harvest operations commence during the period of May 1 through October 15, temperature monitoring shall begin and continue the day operations begin until October 15 of that same year. Temperature monitoring shall then continue in the subsequent years as prescribed in the MRP.

## Calibration Checks

Calibration checks shall be conducted on the data loggers at three separate times during the monitoring season: 1) prior to logger deployment 2) at mid-season data collection 3) at the end of the monitoring season. Calibration check One shall be conducted as described for the two bath tests (below). Calibration checks Two and Three will be conducted against a stream temperature thermometer<sup>1</sup> reading in the field, as described in the mid-season data collection and logger calibration section. Calibration checks are used to document logger performance and accuracy. This provides assurance of the quality of data being collected and reported. Calibration events Two and Three shall occur shortly after sampling results have been downloaded and backed up. Always download data according to the manufacture's instructions. Results of the calibrations must be documented on the calibration check form,<sup>2</sup> the form must be kept with your logbook.

The following bath tests shall be conducted at least once per year, prior to deployment of your logger for the monitoring season, to determine its accuracy. Each logger shall be assigned a unique temperature logger ID number. The calibration check form shall include fields to record the calibration check results for each data logger. The loggers, utilized for continuous temperature monitoring must be specified for full submersion, outdoor freshwater stream temperature monitoring. The logger must also be designed to withstand the environmental conditions it will be subjected to over the full duration of the monitoring season.

<sup>1</sup> All references to a thermometer in this document call for the use of a Certified Reference Thermometer or one certified by the National Institute of Standards and Technology that is designed for total immersion.

<sup>2</sup> Available at the Water Board's website or upon request to Water Board staff.

### Data Logger Ice Bath

This test will allow you to determine the accuracy of your data logger at its lower range.

Place crushed ice in an insulated container that is large enough to hold the loggers that you are testing. It is important to crush the ice to maintain as consistent and uniform a temperature as possible. Fill the container with water to just below the level of the ice and stir the mixture around. Submerge the loggers that you are testing. Place the entire container in a refrigerator to minimize temperature gradients. Allow enough time for the logger to acclimate; at least ten minutes. The ice will melt slowly, so the actual temperature should settle around 0°C if the ice bath was prepared correctly. Place a thermometer in the bath to confirm the temperature against your logger's reading. Allow the logger to collect at least five readings before removing it from the bath. Check the reading of your logger to confirm that the five readings are within the acceptable accuracy range reported by the manufacturer at 0°C. Record the calibration check on your calibration check form.

### Room Temperature Bath

This test will allow you to determine the accuracy of your data logger at its higher range.

Fill an insulated container that is large enough to hold the loggers that you are testing with water. Place the open container in a room overnight that has constant air temperature at the higher end of the loggers temperature range. Submerge the loggers that you are testing. Allow enough time for the logger to acclimate; at least ten minutes. Place a thermometer in the bath to confirm the temperature against your logger's reading. Allow the logger to collect at least five readings before removing it from the bath. Check the reading of your logger to confirm that the five readings are within the acceptable accuracy range reported by the manufacturer at the upper end of the loggers temperature range. Record the calibration check on your calibration check form.

*Note: Water used to make the ice and fill the containers for the bath tests may be tap water or bottled water. Salt water may not be used.*

### **Deployment Procedure**

All loggers must be deployed at the temperature monitoring locations identified in your MRP. Only those loggers that pass the calibration check requirements may be programmed for deployment. Prior to deployment, follow the manufacture's instructions for programming the logger for a delayed start and set the logger to record point measurements every hour. All loggers and other monitoring equipment should be kept clean, stored in protective cases during transportation, and protected from extreme temperatures. Prior to programming the temperature logger, both the computer clock and the watch used to record deployment times shall be synchronized. You must also confirm that the date and time modes of the logger are functioning properly.

During the deployment process, all field data including station number, station name, temperature logger ID numbers, and calibration results must be recorded. All monitoring stations must have a unique site identification number and / or name. A sketch and description of the logger locations that notes a landmark reference point, such as a unique rock, log, root, or tree should also be recorded. In addition, a picture of the water temperate logger location including a landmark should be taken to help relocate the logger in the future.

The most important aspect of logger deployment is to find a location in the stream that is safe to get to and where representative stream temperature data may be obtained during lower flows. The logger should be placed to avoid direct sunlight. In small streams, loggers should be installed as close to the thalweg<sup>3</sup> as possible and six inches off the stream bottom. In large streams, areas of potential temperature stratification (resulting from eddies, groundwater, and tributaries) need to be avoided. In addition, placing the logger in a 2 - 2 ½ foot deep location downstream or alongside a landmark rock or streambed feature improves the chance of it staying submerged during its deployment period and being located for retrieval.

When placing the logger at the sampling point, you must find a method to secure the logger in place for the duration of the monitoring season. Secure a waterproof business card to the logger in a manner that will not inhibit the collection of data. This provides an opportunity for the logger (and the data) to be returned in the event the logger is lost. If the logger will be placed in an area subject to vandalism, you must make accommodations to prevent vandalism. Most manufactures sell products that can camouflage the logger without disrupting its data collection.

### **Mid-season Data Collection and Logger Calibration**

For the safety of the data, data logger manufactures recommend that a logger never be deployed for longer than a three-month period. Mid-season data collection and logger calibration will decrease the chances of losing a full season of temperature data for any one monitoring point. Mid-season data collection and logger calibration shall occur within the last two weeks in July or first two weeks in August. This mid-season check can either be conducted in the field or the loggers may be taken back to the lab for data collection and analysis. Loggers removed from the field to perform the mid-season calibration check must be returned to their monitoring station within four days.

Upon inspection of the site, look for signs of physical disruption of channel conditions; inspect the logger for fouling, corrosion, or damage; perform a battery or power check; clean or service the sensor as needed; and calibrate the logger as described below.<sup>4</sup>

To conduct the mid-season data collection and logger calibration you must begin by checking the stream temperature with a thermometer. Place the thermometer next to the

---

<sup>3</sup> The line defining the lowest points along the length of a riverbed or valley.

<sup>4</sup> This inspection regime must be repeated when the logger is removed from the field at the end of the monitoring season.

data loggers long enough for it to acclimate and then take the temperature reading. Record the thermometer's temperature reading on the calibration check form. After recording the temperature readings from the thermometer in the stream, remove the data loggers from the stream and download the data either onto a laptop in the field or on your computer in the lab. Check the reading of your logger to confirm that the reading is within the acceptable accuracy range presented by the manufacturer. Any loggers not reading within an acceptable range, found to be damaged, missing, or destroyed, must be replaced immediately with a logger that meets the specifications per these procedures. Spare loggers should be kept on hand for this purpose. Document all findings from the mid-season data collection and logger calibration on the calibration check form.

## Reporting Requirements

By November 15 of each year, you must submit an Annual Report to the Central Coast Water Board per the requirements in your MRP. When reporting the temperature data you must include:

- ❖ A summary of the water quality monitoring performed during the previous year.
- ❖ A detailed map with all monitoring locations clearly marked with unique site identification tags.<sup>5</sup>
- ❖ All data submitted electronically in excel format.
- ❖ Make and model of the data loggers being used at each monitoring location.
  - Copy of the manufacture's protocol / recommendation for proper use of the loggers.
- ❖ Calibration check form for each data logger.
- ❖ Description of any modifications or adjustments made based on the calibration checks and field observations.

---

<sup>5</sup> The map needs to be submitted once unless monitoring station locations are modified. In the future a map with unique monitoring site tags shall be submitted with the Timber Harvest Information Form and Fact Sheet.

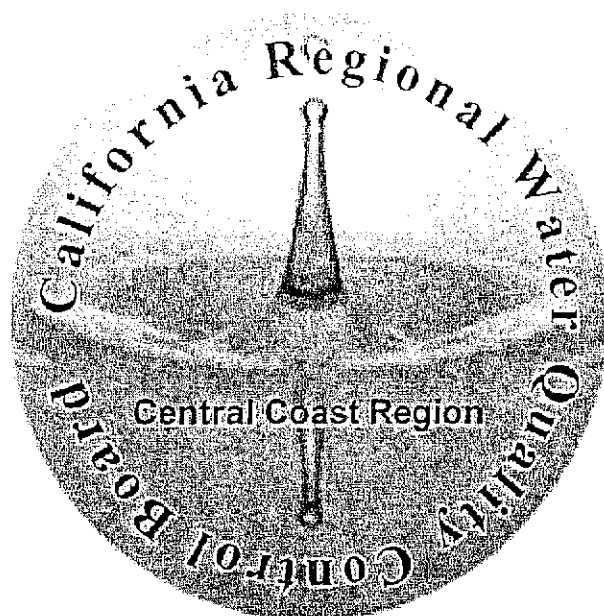
## Literature Consulted

Quick Accuracy Check Copyright © 1996-2004 Onset Computer Corporation  
<[http://www.onsetcomp.com/Support/HS\\_Support/5317\\_acc\\_test.html](http://www.onsetcomp.com/Support/HS_Support/5317_acc_test.html)>

Schuett-Hames D., A.E. Pleus, E. Rashin, and J. Matthews. 1999. *TFW Monitoring Program method manual for the Stream Temperature Survey*. Prepared for the Washington State Department of Natural Resources under the Timber Fish and Wildlife Agreement, Olympia, WA. TFW-AM9-999005. DNR # 107. June

Wagner Richard J., Harold C. Matraw, George F. Ritz, and Brett A. Smith. 2000. *Guidelines and Standard Procedures for Continuous Water-Quality Monitors: Site Selection, Field Operation, Calibration, Record Computation, and Reporting*. U.S. Geological Survey, Water-Resources Investigations Report 00-4252. Reston, Virginia.

Ward, William J. *Continuous Temperature Sampling Protocols for the Environmental Monitoring and Trends Section*. 2003. Washington State Department of Ecology. Olympia, WA. Publication No. 03-03-052. December.



## Timber Harvest Program

### Standard Operating Procedures for Instream Turbidity Monitoring

October 2006



## Table of Contents

Purpose.....	3
Timing: Monitoring Season.....	4
Monitoring Triggers: Rainfall Information.....	4
Locations: Monitoring Sites .....	4
Equipment: Turbidimeter / Turbidity Probe .....	4
Calibration and Accuracy Checks.....	5
Field Collection Procedures.....	5
Probe.....	5
Grab samples .....	6
Stage Measurements .....	6
Sample Analysis.....	6
Data Sheet .....	7
Reporting Requirements .....	8

### Purpose

This document provides standard operating procedures for instream turbidity monitoring on forest streams pursuant to the General Conditional Waiver of Waste Discharge Requirements – Timber Harvest Activities in the Central Coast Region (General Waiver). These procedures, when followed correctly, will support the collection of turbidity grab samples or insitu probe measurement data. The data will be used for trend analysis and to determine compliance with Monitoring and Reporting Program R3-2005-0066.

Throughout this document "the discharger" means the landowner and anyone working on behalf of the landowner in the conduct of timber harvest activities including monitoring.

### Timing: Monitoring Season

Monitoring shall begin at the onset of timber harvest operations (i.e. tree falling, yarding, and / or roadwork, etc.) and shall be consistent with the Monitoring and Reporting Program (MRP), any conditions set forth within the General Waiver or Waste Discharge Requirements, and the procedures outlined in this document. The turbidity monitoring season begins on or after October 15 as specified in the MRP. You are required to conduct forensic monitoring throughout the entire year as necessary. Monitoring shall continue as specified in the MRP until it is revised or rescinded.

### Monitoring Triggers: Rainfall Information

Monitoring events<sup>1</sup> are triggered by rainfall events as prescribed in the MRP and as necessary according to forensic monitoring requirements.

The discharger shall document when and where rainfall data was obtained for each monitoring event on the Timber Harvest Turbidity Monitoring Field Data Sheet (Data Sheet). The Data Sheet may be downloaded from the website at: [http://www.waterboards.ca.gov/centralcoast/Facilities/Timber\\_Harvest/index.htm](http://www.waterboards.ca.gov/centralcoast/Facilities/Timber_Harvest/index.htm) and then click on "turbidity." Hard copies of the data sheet are available upon request.

Rain gauges used shall represent precipitation at the harvest site as closely as possible. Compare rain gauge readings at the site to published gauges whenever possible.

### Locations: Monitoring Sites

Turbidity sampling shall occur at monitoring locations specified in the MRP or identified during forensic monitoring. Identify the monitoring locations for each harvest at the top of the Data Sheet and include the latitude and longitude of the location in North American Datum of 1983 (NAD83) (i.e. decimal degree format dd.ddddd). Latitude and longitude are available at the [www.topozone.com](http://www.topozone.com) website.

### Equipment: Turbidimeter / Turbidity Probe

The MRP specifies that a handheld turbidimeter is acceptable for the purposes of measuring instream turbidity. A handheld turbidimeter is either field equipment, equipped with a probe that takes direct turbidity readings from the watercourse, or bench top laboratory equipment that takes a turbidity reading from a sample

---

<sup>1</sup> A monitoring event is defined as all the turbidity samples or readings taken during the same storm event.

already collected from the monitoring location. Some models of the bench top style turbidimeter are designed to be taken into the field.

Whether a bench top turbidimeter or probe is used, the equipment must report turbidity levels in Nephelometric Turbidity Units (NTUs) and be able to read within a scale of at least 0 – 1,000. Each piece of equipment must be assigned a unique equipment identification number.

### Calibration and Accuracy Checks

Turbidity equipment (probe or bench top turbidimeter) must be calibrated within twenty-four hours prior to each sampling event using standard reference materials and following the manufactures instructions. Calibration must include at least two calibration points that are intended to bracket the expected conditions in the field. Calibration data must be recorded on the data sheet and include the equipment identification number, date and time, result prior to calibration, value of calibration standard, and result following calibration.

An accuracy check must be performed on the turbidity equipment within 24 hours following each sampling event. Accuracy check must include the same calibration points and certified reference materials as were used in the pre sampling calibration. If the readings are not within 5% of the standard value for any of the ranges, the probe or bench top turbidimeter must be recalibrated. Accuracy check data must be recorded on the data sheet and include equipment identification number, date and time, accuracy check result, and value of calibration standard.

### Field Collection Procedures

Take turbidity reading with the probe or collect the grab sample away from the stream bank in the main current in a location that best represents the water column. An optimal location would be in a relatively straight reach that is well mixed, with uniform hydraulics, and away from turbulence. Never sample stagnant water.

When wading<sup>2</sup> to the site try not to disturb bottom sediment. Be careful not to take a turbidity reading or collect water that has sediment from bottom disturbance. Mark the site with flagging, photo-documentation, or other method to ensure that subsequent sampling occurs at the same location.

### Probe

The discharger must take a turbidity reading using a probe that has been cleaned according to the manufacture's specifications or collect the sample using a clean sample container.

---

<sup>2</sup> A small clean container, such as a bucket, attached to a long handle may be used to collect a sample from a stream if direct access to the bank is difficult or dangerous.

If using a probe, identify a sampling location and place the probe in the stream at least 2.0 cm below the water surface but not more than 4.0 cm below the surface. Allow the probe measurement to stabilize (see manufacturer's instructions) and record the result on the field data sheet.

### Grab samples

The sample container must be a plastic, wide mouthed, bottle with a screw top lid. Analyze the samples immediately. If samples will be placed in storage prior to analysis, they must be stored in amber laboratory bottles at 4° C for a time period not to exceed twenty four hours.

All bottles must be cleaned prior to each use according to the following specifications, 1) Wash each sample container with a brush and phosphate-free detergent, 2) Rinse three times with cold tap water.

Prior to sample collection label the bottle with the name of the sampler, location, and the date/time the sample was taken. Identify the sampling location and stand facing upstream. Rinse sample container three times with ambient water before filling with sample. To collect the sample, lower the lip of the bottle **below the surface of the water** and towards the current. Collect the sample with a "scooping" motion to sample the full water column instead of just one spot. (see Attachment 1, Collecting a Turbidity Grab Sample) Promptly<sup>3</sup>, pour out excess water to leave at least a 1-inch air space so the sample can be re-suspended (by inverting the sample container several times) prior to analysis.

### Stage Measurements

At each monitoring location establish a staging location where the substrate is relatively stable. During each sampling event measure stream stage with a yard stick, staff gauge, or staff plate for comparison to future measurements.

### Sample Analysis

Perform the sample analysis per the manufacturer's recommendation for the turbidimeter. If performing analysis with a bench top turbidimeter, conduct analysis on three separate sub-samples<sup>4</sup> from the same bottle and record the median<sup>5</sup> on the Data Sheet. Always re-suspend the sample by gently inverting the sample bottle several times (do not shake as air bubbles can interfere with your readings) before transferring to sub sample vials to prevent a misrepresentative reading due to settling.

---

<sup>3</sup> This must be done immediately after collecting the sample. Waiting to pour out excess water can create an unrepresentative sample as some material may have already settled.

<sup>4</sup> If using bench top turbidimeter, all vials for subsamples must be cleaned to manufacturer's recommendations.

<sup>5</sup> Constituting the middle value in the distribution.

## Data Sheet

All sections of the field data sheet must be completed for each monitoring event.

Identify the Timber Harvest Plan (THP) or Nonindustrial Timber Management Plan (NTMP) number, Plan Name, and monitoring year. For NTMPs identify the unit or notice of timber operations (NTO) number.

Identify the monitoring sites with a unique site identification (ID). This ID needs to correlate to the monitoring maps in the MRP. Provide the latitude and longitude of each site in decimal degree format (e.g. 35.345600N 122.678900W).

Identify the type of turbidimeter or probe.

Provide data from pre sampling calibration prior to each monitoring event, including the equipment identification number, date and time, result prior to calibration, value of calibration standard, and result following calibration. Record the name of the person who conducted the calibration.

Provide data from accuracy checks following each monitoring event, including the equipment identification number, date and time, accuracy check result, and value of the standard. Record the name of the person who conducted the accuracy check.

Provide the date and time each sample was taken and the date and time the sample was analyzed. Record the stage height and note any additional information such as problems at the site or any other observations.

Note the rain gauge location reading and time; amount and duration of rainfall; and current weather.

Estimate whether the stream is on the rising or falling limb of the hydrograph.

## Reporting Requirements

By November 15 of each year, the discharger must submit an Annual Report to the Central Coast Water Board per the requirements in the MRP and the following:

- ❖ A summary of the water quality monitoring performed during the previous year. Any monitoring described in the summary must also include the data submitted in an electronic format compatible with Excel.
- ❖ A detailed map<sup>6</sup> meeting the following specifications:
  - In color (if possible).
  - Title stating: "Water Quality Monitoring Locations for THP No. XXXX"
  - All monitoring locations and routes clearly marked with unique site identification tags.
  - A Key or Legend identifying all monitoring locations and routes.
  - North Arrow.
  - Scale
- ❖ Completed Field Data Sheets with data from all monitoring events.

---

<sup>6</sup> The map needs to be submitted only once unless monitoring station locations are modified. In the future a map with unique monitoring site tags shall be submitted with the Timber Harvest Information Form and Fact Sheet.

#### Literature Consulted

Anderson, Chauncey W. "Chapter A6 Field Measurements Version 2.1 – 6.7 Turbidity" National Field Manual for the Collection of Water-Quality Data United States Geological Survey. September 2005.

Eaton, Andrew D. Clesceri, Lenore S. Greenberg, Arnold E. eds. "2130 Turbidity" Standard Methods for the Examination of Water and Wastewater Washington D.C., 1995 p. 2-8 – 2-11

Ice, Dr. George. Dent, Liz. Walsh, Jenny. Hafele, Rick. Wilkinson, Dave. Brodziak, Lana. Caton, Larry. Hunt, Travis. Hammond, Ellen. Measeles, Paul. et all. "Chapter 11 and Appendix E" Oregon Plan for Salmon and Watersheds Water Quality Monitoring Technical Guidebook Version 2.0 July 1999

medians Copyright © 2006, Lexico Publishing Group, LLC. 19 Sept. 2006  
<<http://www.dictionary.com>>

United States Environmental Protection Agency Office of Water. "Chapter 5.5 Water Quality Conditions – Turbidity" Volunteer Stream Monitoring: A Methods Manual EPA 841-B-97-003. November 1997

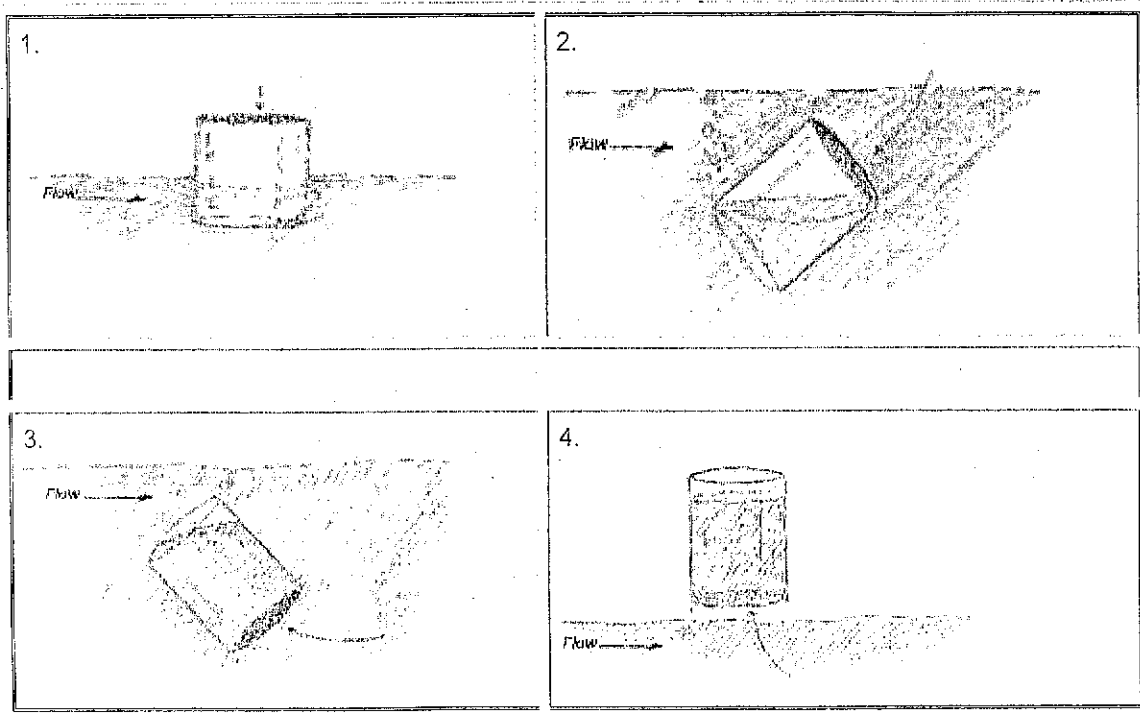
White, Adona. Water Resource Control Engineer. North Coast Regional Water Quality Control Board. Interview, Review, Edits. 21 Sept. 2006

Document1





Getting into position to take a turbidity grab sample.



Taking a water sample.

Turn the bottle into the current and scoop in an upstream direction.

Sketches taken from USEPA "Quality Assurance, Quality Control, and Quality Assessment Measures. Figures 5.2 and 5.3" Volunteer Stream Monitoring: A Methods Manual <http://www.epa.gov/volunteer/stream/vms50.html>